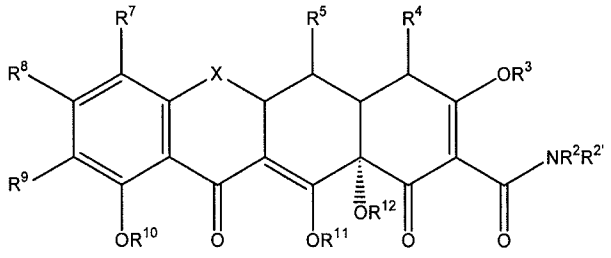
AMENDMENTS TO THE CLAIMS:

Listing of Claims:

This listing of claims will replace all prior versions of the claims and listing of the claims in the application:

1. **(Currently Amended)** A method for treating a subject for a DTMR associated with splicing of nuclear RNA, comprising: administering to said subject an effective amount of a tetracycline compound of formula (I):



(I)

wherein

R^2, $R^{2'}$, $R^{4'}$, and $R^{4''}$ are each independently hydrogen, alkyl, alkenyl, alkynyl, alkoxy, alkylthio, alkylsulfinyl, alkylsulfonyl, alkylamino, arylalkyl, aryl, heterocyclic, heteroaromatic or a prodrug moiety;

R^3, R^{10}, R^{11} and R^{12} are each hydrogen, alkyl, alkenyl, alkynyl, substituted carbonyl, or a pro-drug moiety;

R^4 is $NR^{4'}R^{4''}$, alkyl, alkenyl, alkynyl, hydroxyl, halogen, or hydrogen;

R^5 is hydroxyl, hydrogen, thiol, alkanoyl, aroyl, alkaroyl, aryl, heteroaromatic, alkyl, alkenyl, alkynyl, alkoxy, alkylthio, alkylsulfinyl, alkylsulfonyl, alkylamino, arylalkyl, alkyl carbonyloxy, or aryl carbonyloxy;

R^6 and $R^{6'}$ are each independently hydrogen, methylene, absent, hydroxyl, halogen, thiol, alkyl, alkenyl, alkynyl, aryl, alkoxy, alkylthio, alkylsulfinyl, alkylsulfonyl, alkylamino, or an arylalkyl;

R^7 is hydrogen, hydroxyl, halogen, thiol, nitro, alkyl, alkenyl, alkynyl, aryl, alkoxy, alkylthio, alkylsulfinyl, alkylsulfonyl, arylalkyl, amino, arylalkenyl, arylalkynyl, acyl, aminoalkyl, heterocyclic, thionitroso, or $-(CH_2)_{0-3}NR^{7c}C(=W')WR^{7a}$;

R^8 is hydrogen, hydroxyl, halogen, thiol, nitro, alkyl, alkenyl, alkynyl, aryl, alkoxy, alkylthio, alkylsulfinyl, alkylsulfonyl, alkylamino, amino, arylalkenyl, arylalkynyl, acyl, aminoalkyl, heterocyclic, thionitroso, or $-(CH_2)_{0-3}NR^{8c}C(=E')ER^{8a}$;

R^9 is hydrogen, hydroxyl, halogen, thiol, nitro, alkyl, alkenyl, alkynyl, aryl, alkoxy, alkylthio, alkylsulfinyl, alkylsulfonyl, arylalkyl, amino, arylalkenyl, arylalkynyl, acyl, aminoalkyl, heterocyclic, thionitroso, or $-(CH_2)_{0-3}NR^{9c}C(=Z')ZR^{9a}$;

R^{7a}, R^{7b}, R^{7c}, R^{7d}, R^{7e}, R^{7f}, R^{8a}, R^{8b}, R^{8c}, R^{8d}, R^{8e}, R^{8f}, R^{9a}, R^{9b}, R^{9c}, R^{9d}, R^{9e}, and R^{8f} are each independently hydrogen, acyl, alkyl, alkenyl, alkynyl, alkoxy, alkylthio, alkylsulfinyl, alkylsulfonyl, alkylamino, arylalkyl, aryl, heterocyclic, heteroaromatic or a prodrug moiety;

R^{13} is hydrogen, hydroxy, alkyl, alkenyl, alkynyl, alkoxy, alkylthio, aryl, alkylsulfinyl, alkylsulfonyl, alkylamino, or an arylalkyl;

E is $CR^{8d}R^{8e}$, S, NR^{8b} or O;

E' is O, NR^{8f}, or S;

W is $CR^{7d}R^{7e}$, S, NR^{7b} or O;

W' is O, NR^{7f}, or S;

X is $CHC(R^{13}Y'Y)$, $C=CR^{13}Y$, $CR^{6'}R^6$, S, NR^6, or O;

Y' and Y are each independently hydrogen, halogen, hydroxyl, cyano, sulfhydryl, amino, alkyl, alkenyl, alkynyl, alkoxy, alkylthio, alkylsulfinyl, alkylsulfonyl, alkylamino, or an arylalkyl;

Z is $CR^{9d}R^{9e}$, S, NR^{9b} or O;

Z' is O, S, or NR^{9f}, and pharmaceutically acceptable salts, esters and enantiomers thereof, such that said DTMR associated with splicing of nuclear RNA is treated, wherein said DTMR associated with splicing of nuclear RNA is spinal muscular atrophy, and further wherein said effective amount is effective to modulate splicing of said subject's nuclear RNA.

2.-36. **(Canceled)**

37. **(Previously Presented)** The method of claim 1, wherein R^2, $R^{2'}$, R^8, R^{10}, R^{11}, and R^{12} are each hydrogen, X is $CR^6R^{6'}$, and R^4 is $NR^{4'}R^{4''}$, wherein $R^{4'}$ and $R^{4''}$ are each methyl.

38. **(Original)** The method of claim 37, wherein R^9 is hydrogen.

39. **(Original)** The method of claim 38, wherein R^7 is substituted or unsubstituted aryl.

40. **(Original)** The method of claim 39, wherein R^7 is substituted or unsubstituted phenyl.

41. **(Original)** The method of claim 40, wherein R^7 is substituted with one or more substituents.

42. **(Original)** The method of claim 41, wherein said substituents are each independently alkyl, alkenyl, alkynyl, halogen, hydroxyl, alkylcarbonyloxy, arylcarbonyloxy, alkoxycarbonyloxy, aryloxycarbonyloxy, carboxylate, alkylcarbonyl, arylcarbonyl, alkoxycarbonyl, aminocarbonyl, alkylaminocarbonyl, dialkylaminocarbonyl, alkylthiocarbonyl, alkoxyl, phosphate, phosphonato, phosphinato, cyano, amino, acylamino, amidino, imino, sulfhydryl, alkylthio, arylthio, thiocarboxylate, sulfates, alkylsulfinyl, sulfonato, sulfamoyl, sulfonamido, nitro, trifluoromethyl, cyano, azido, heterocyclyl, alkylaryl, aryl or heterocyclic moiety.

43. **(Original)** The method of claim 38, wherein R^7 is substituted or unsubstituted alkenyl.

44. **(Original)** The method of claim 37, wherein R^7 is substituted or unsubstituted heteroaryl and R^9 is alkyl.

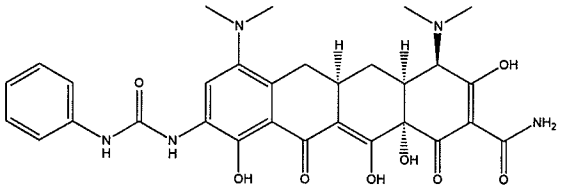
45. **(Original)** The method of claim 36, wherein R^7 is dialkylamino.

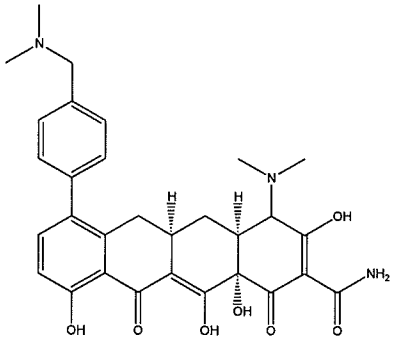
46. **(Original)** The method of claim 45, wherein R^9 is alkylamino.

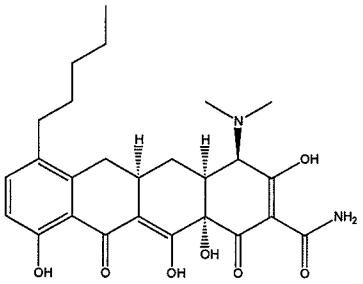
47. **(Original)** The method of claim 45, wherein R^9 is $-NR^{9c}C(=Z')ZR^{9a}$, wherein R^{9c} is hydrogen, Z' is nitrogen or oxygen, Z is NH, and R^{9a} is aryl or aralkyl.

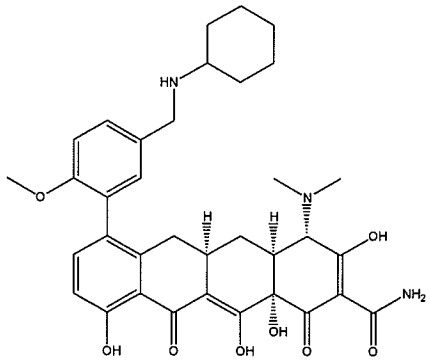
48.-53. **(Canceled)**

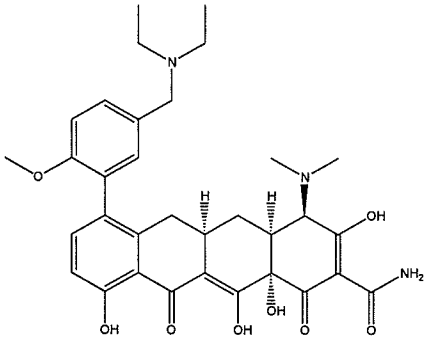
54. **(Previously Presented)** The method of claim 1, wherein said tetracycline compound is a tetracycline compound selected from the group consisting of:

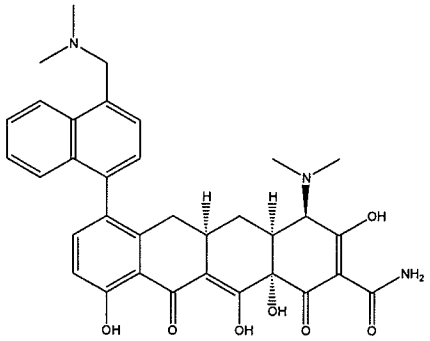


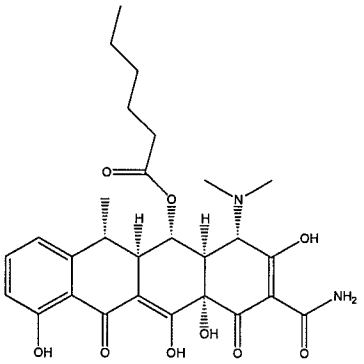


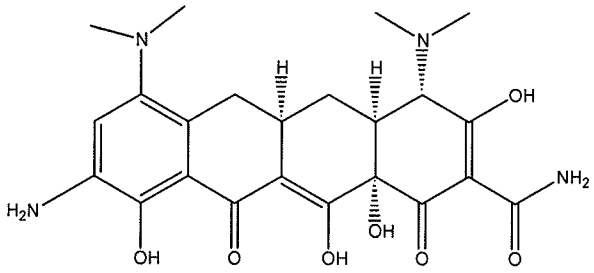


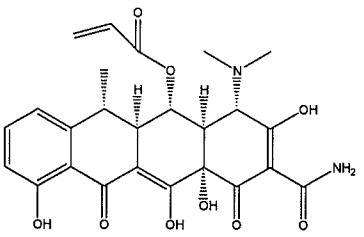


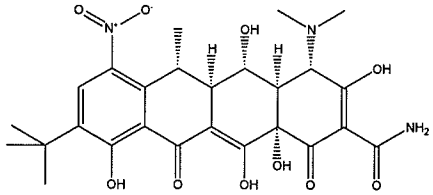


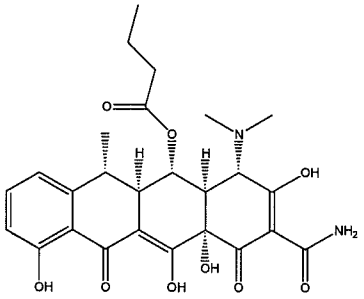


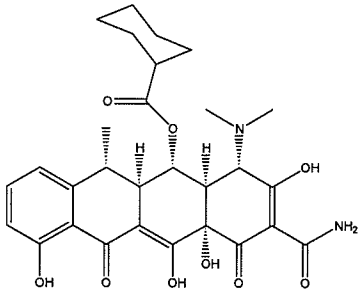


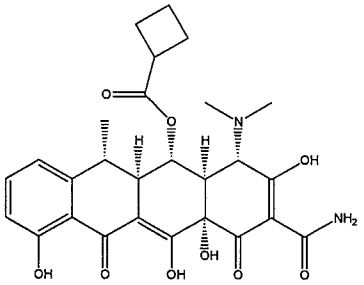


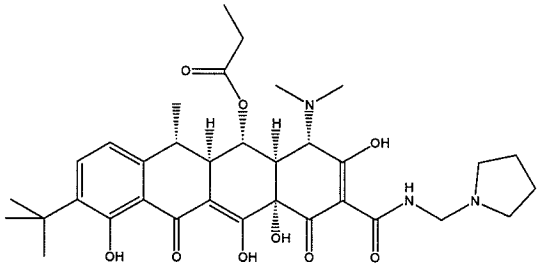


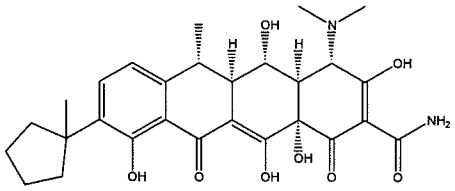


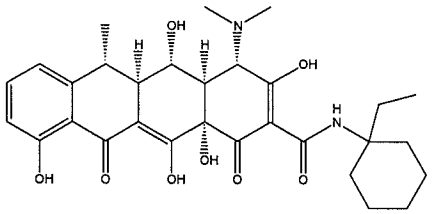


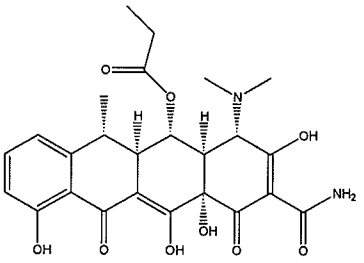


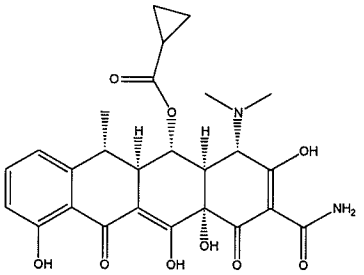


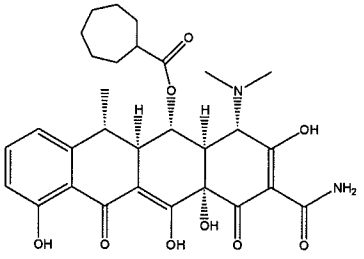


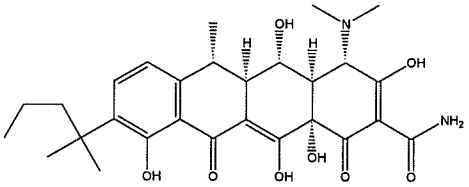


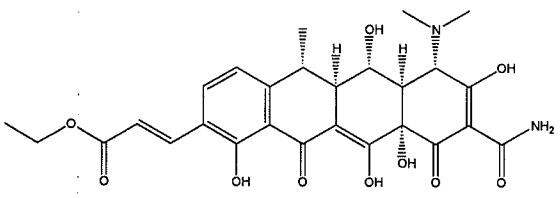


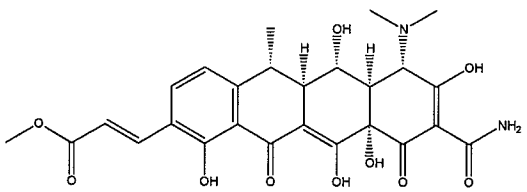


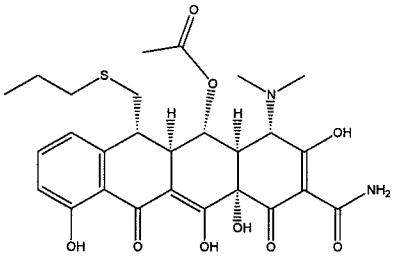


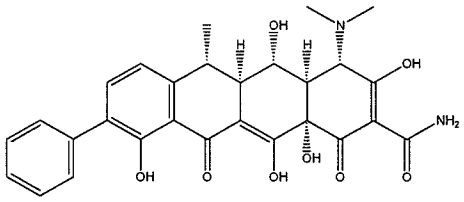


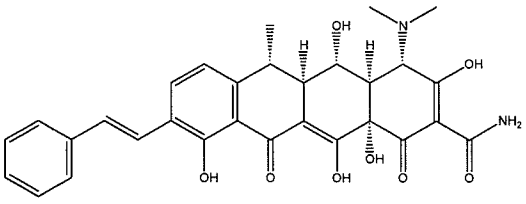


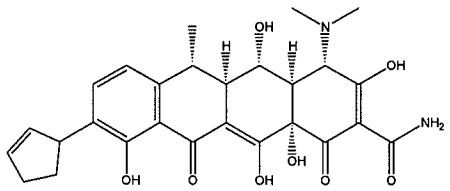


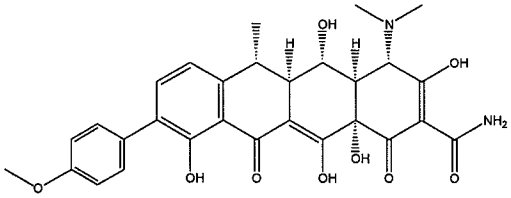


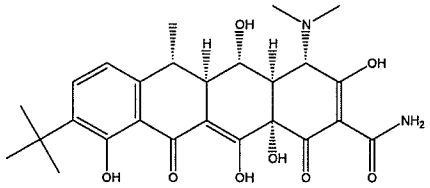


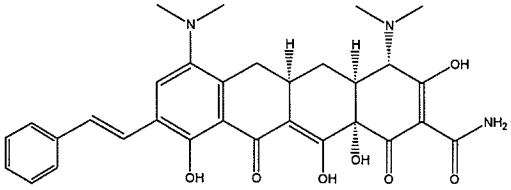


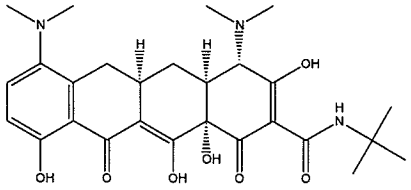


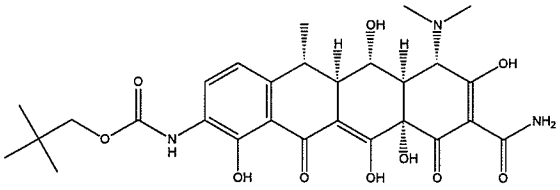


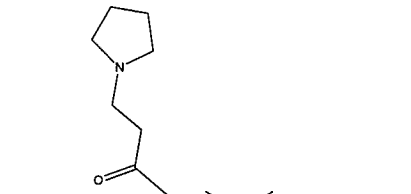


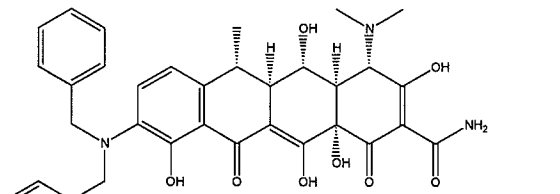


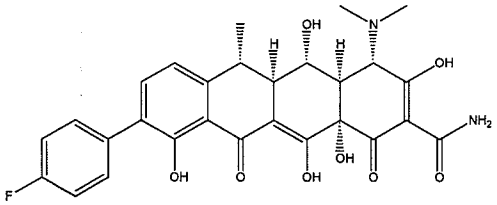


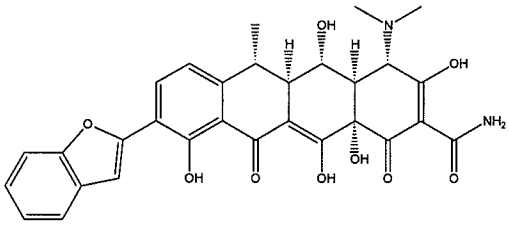


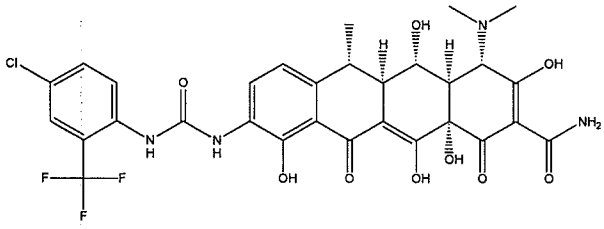


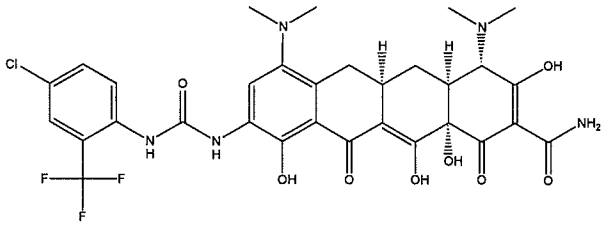


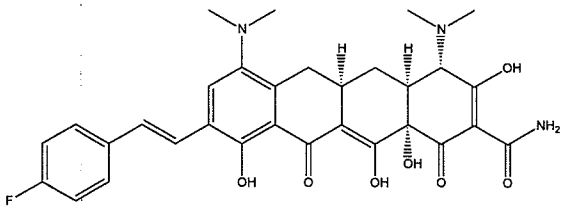


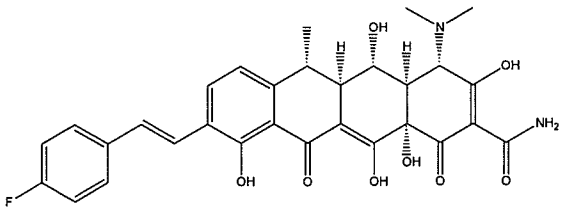


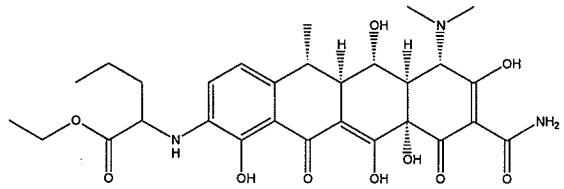


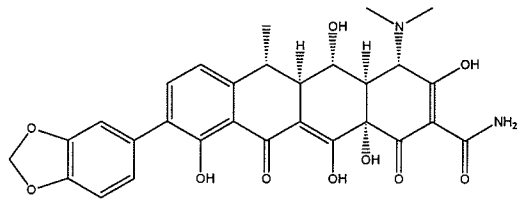


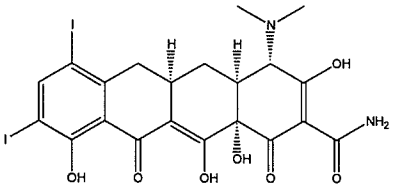


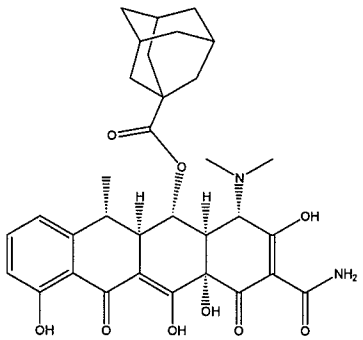


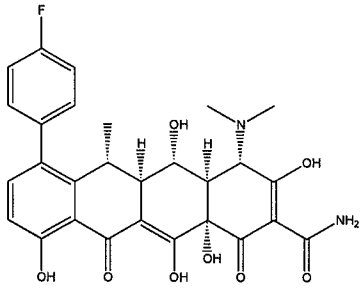


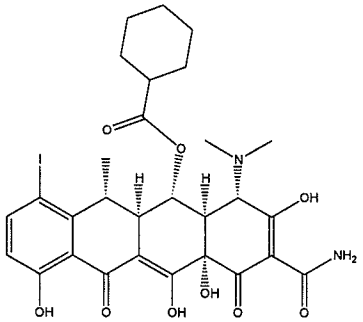


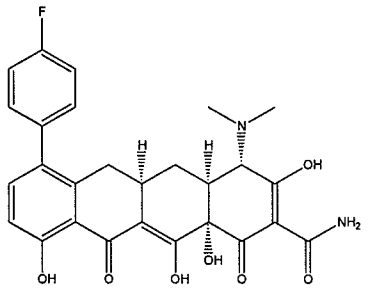


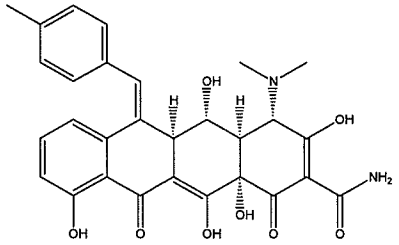


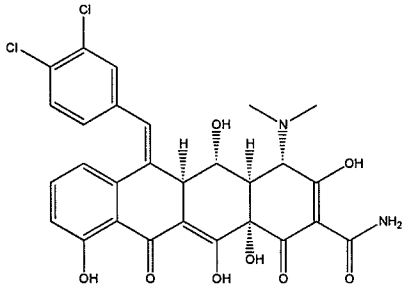


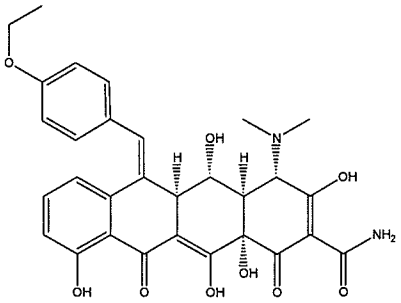


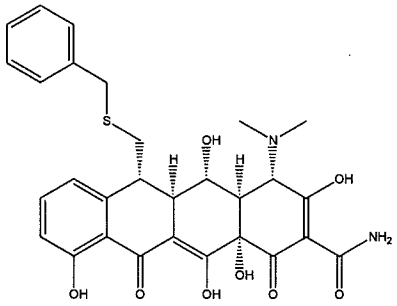


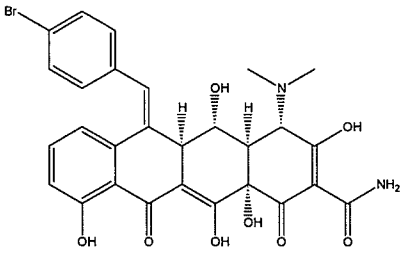


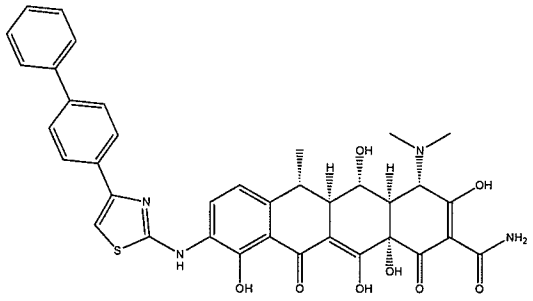


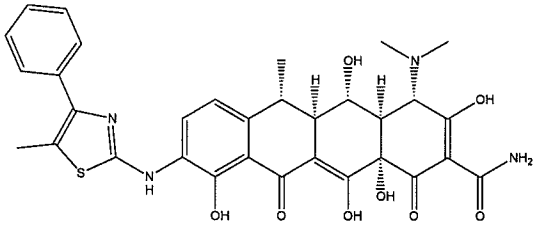


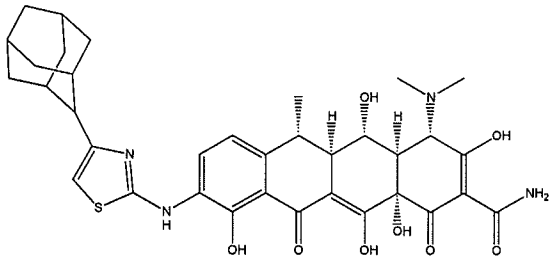


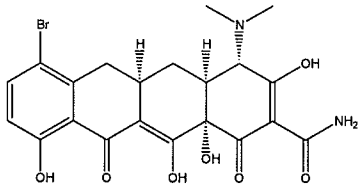


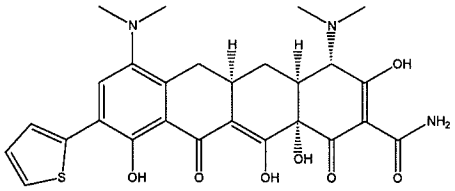


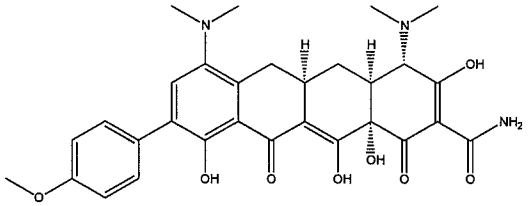


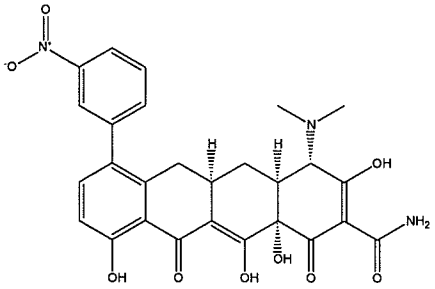


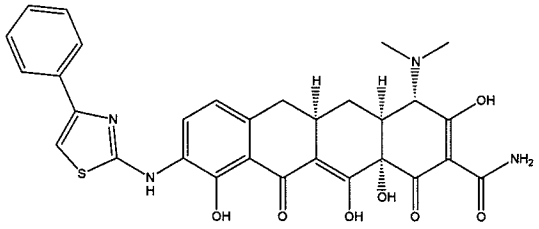


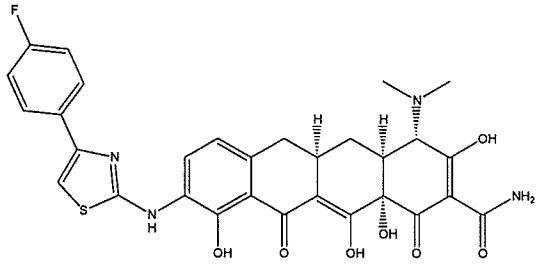


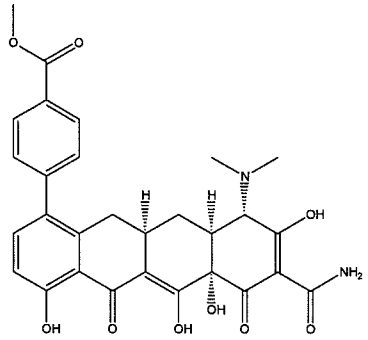


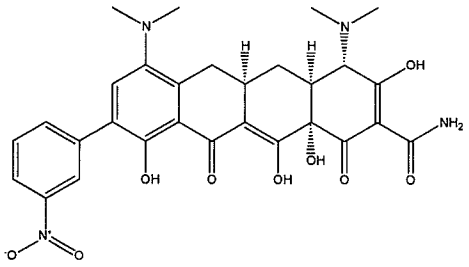


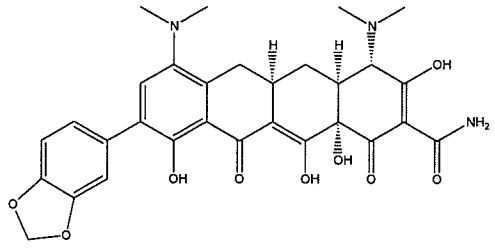


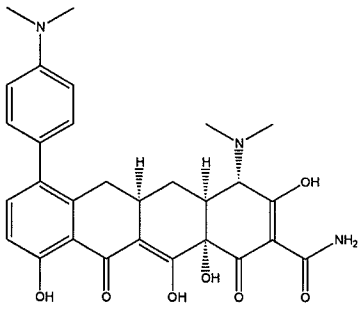


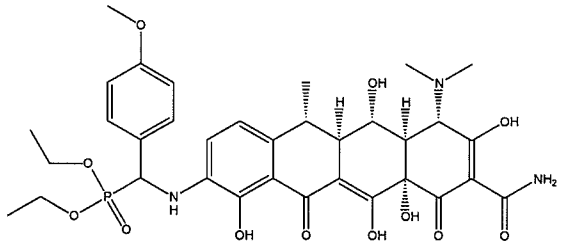


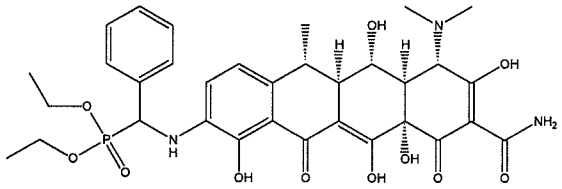


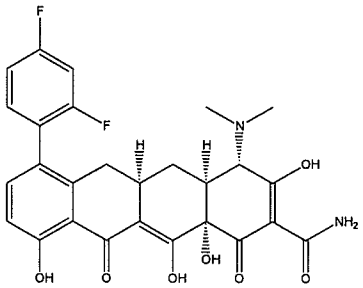


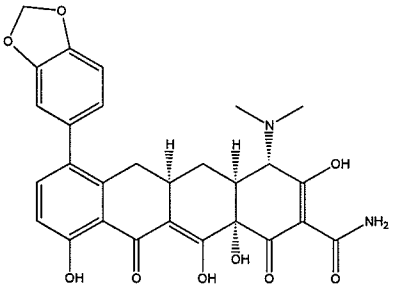


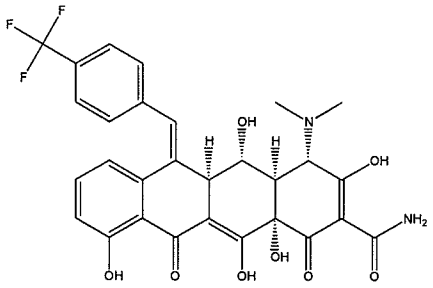


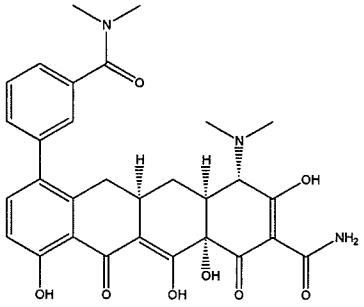


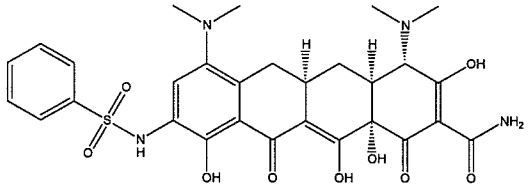


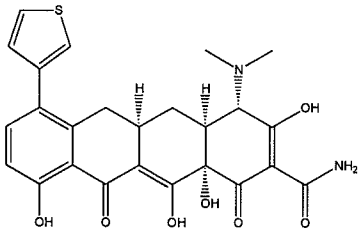


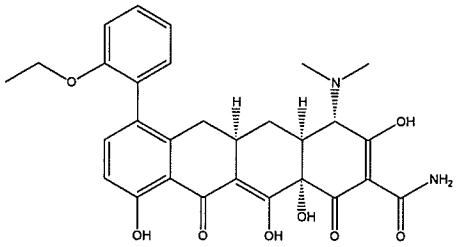


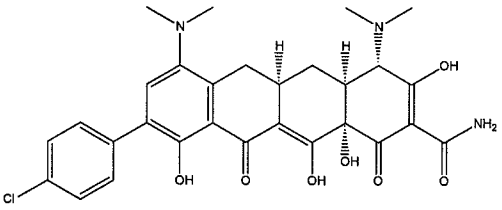


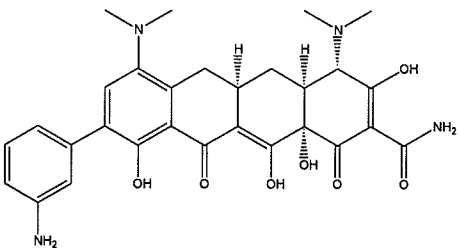


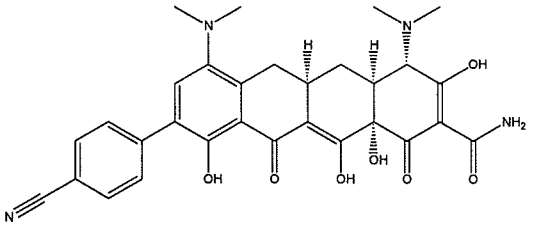


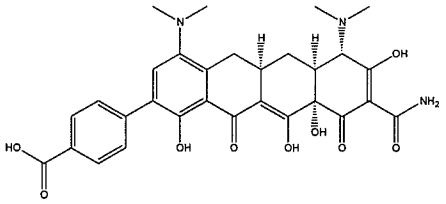


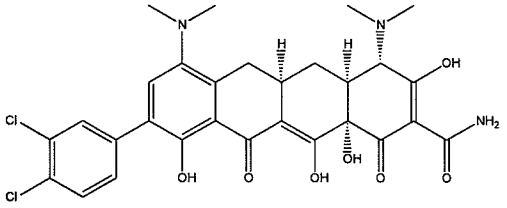


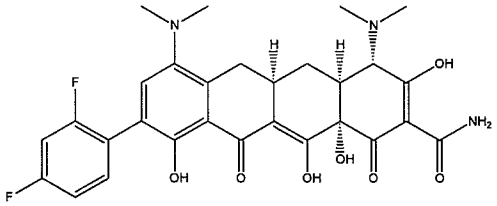


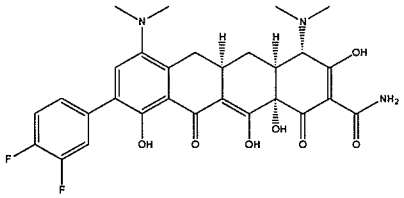


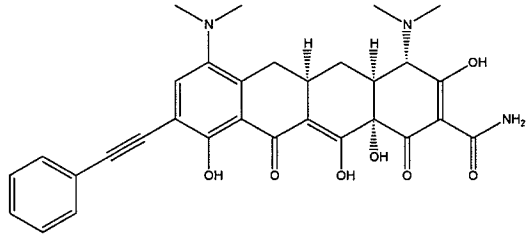


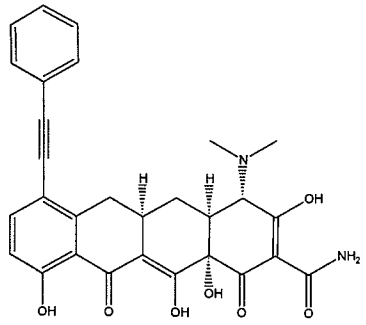


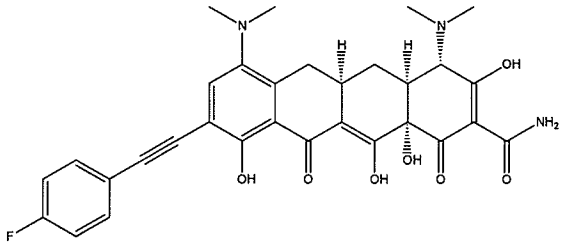


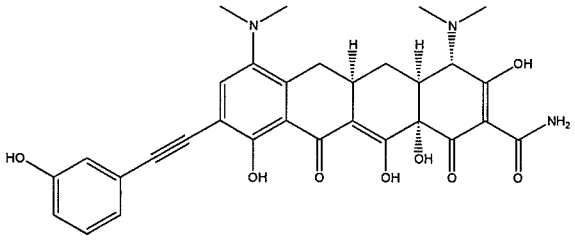


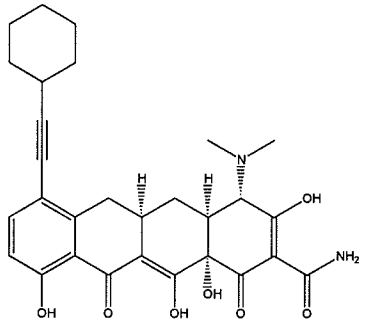


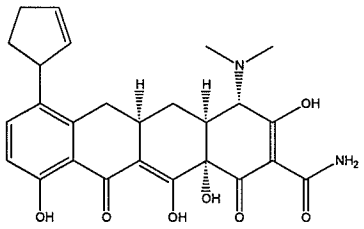


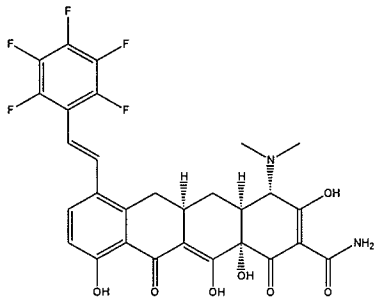


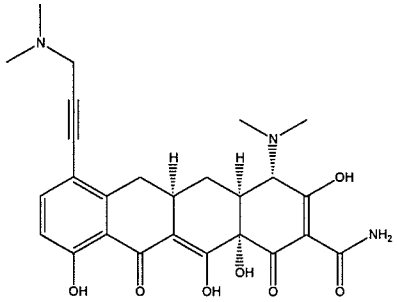


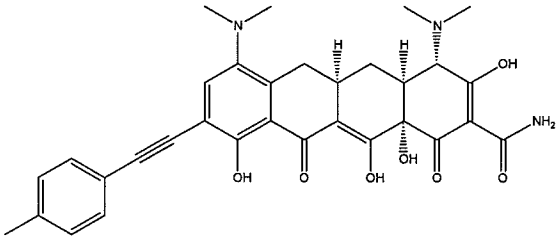


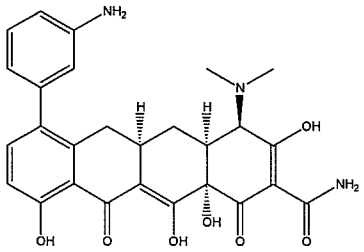


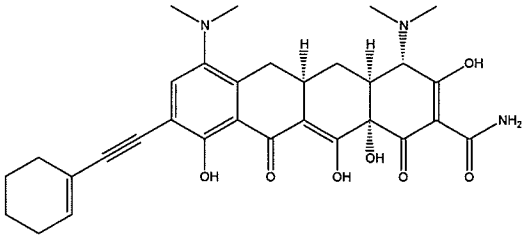


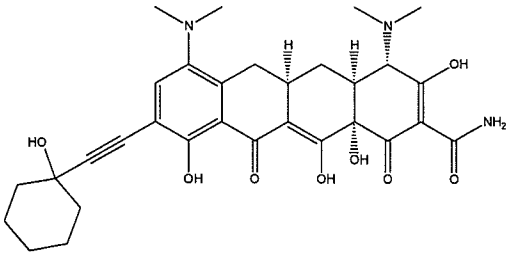


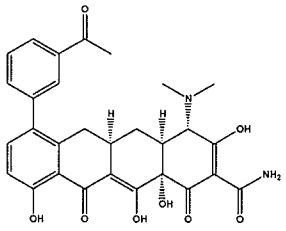


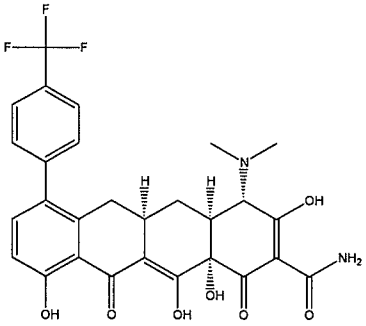


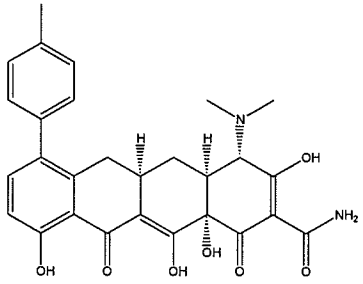


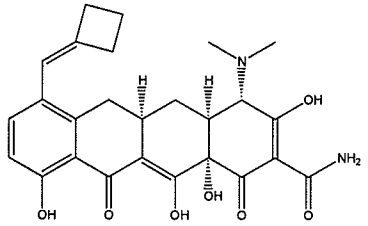


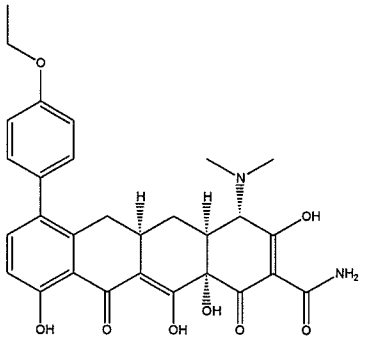


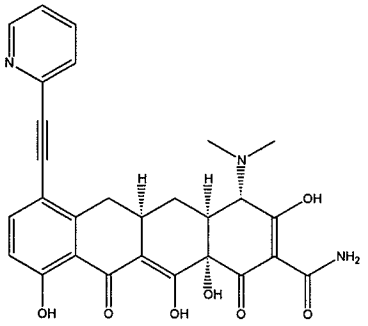


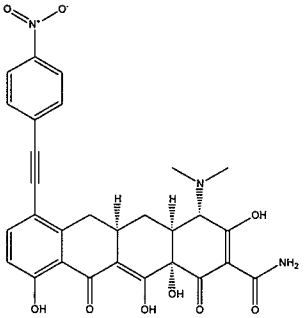


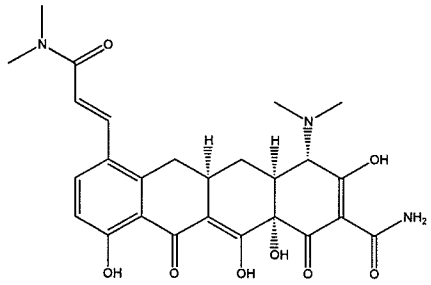


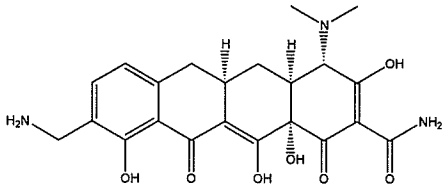


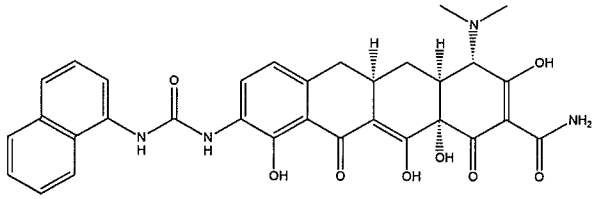


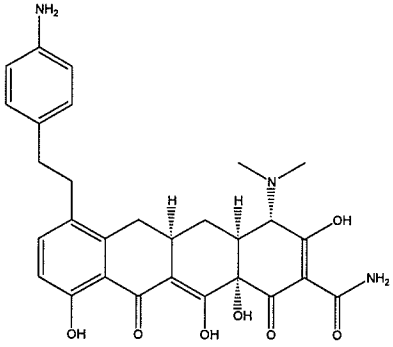


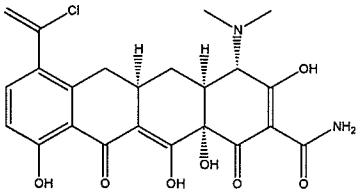


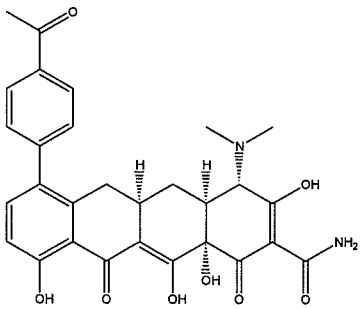


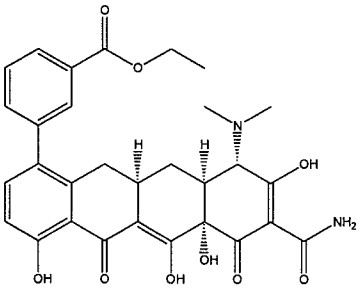


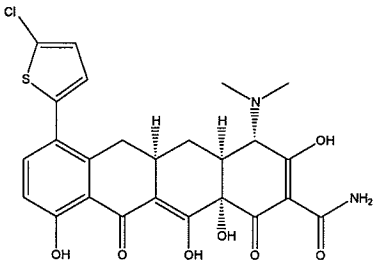


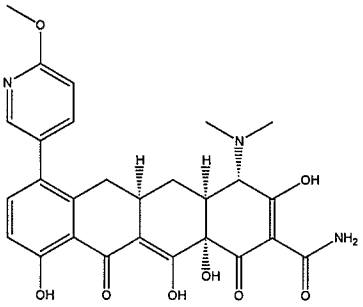


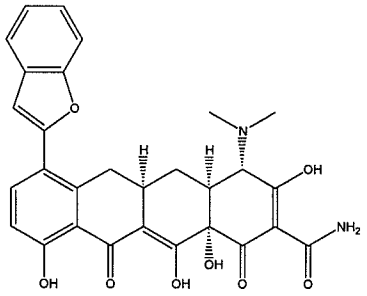


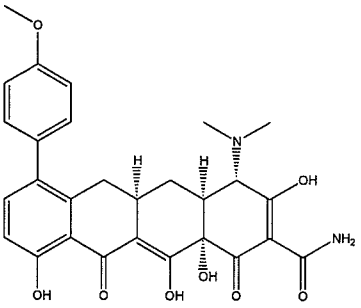


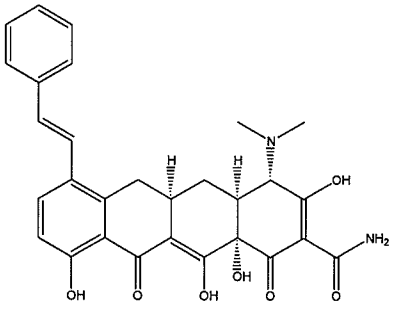


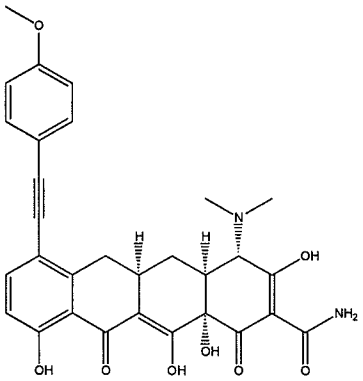


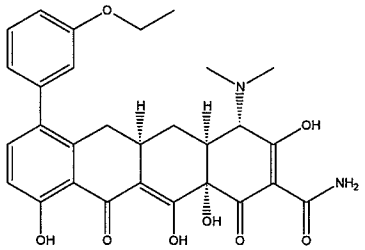


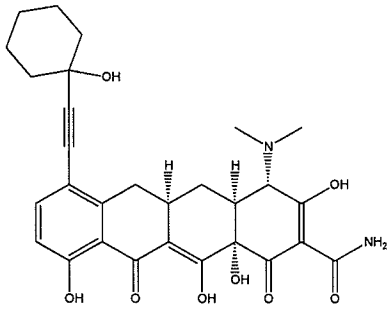


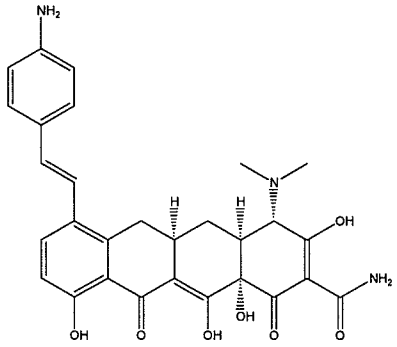


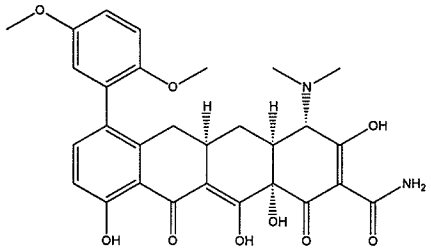


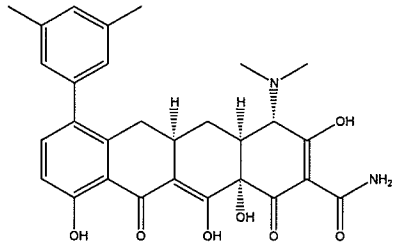


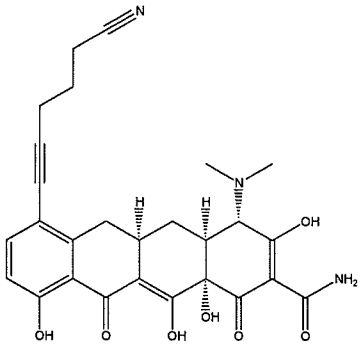


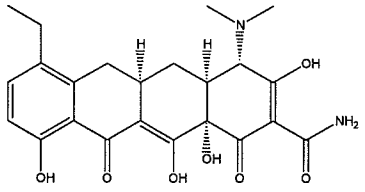


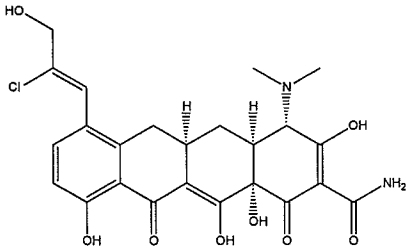


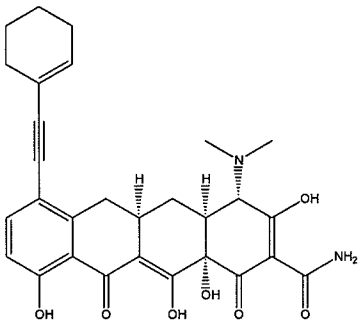


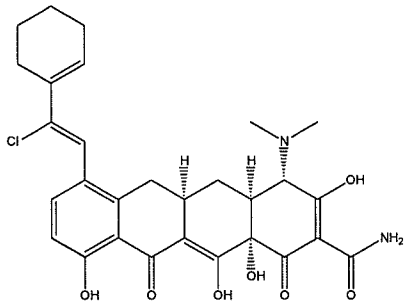


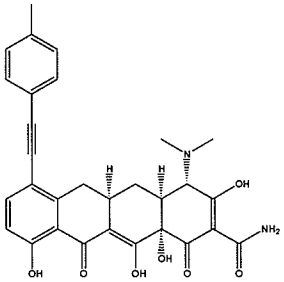


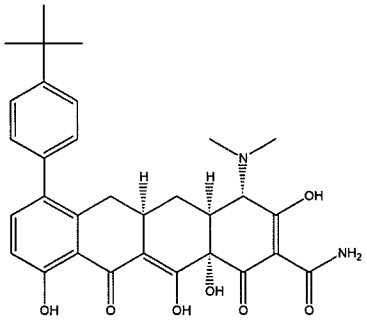


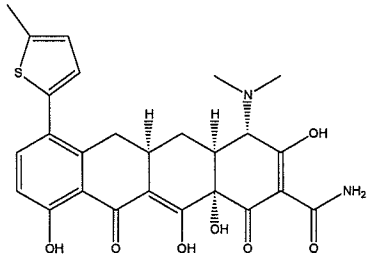


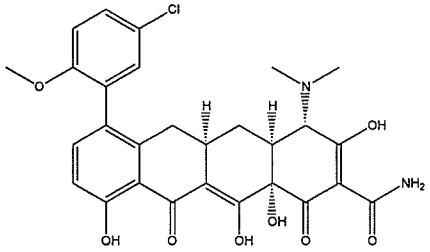


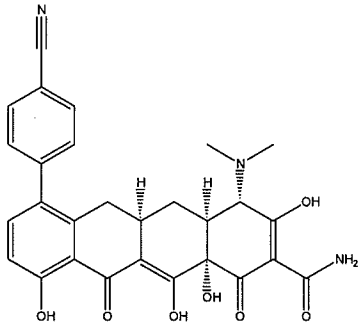


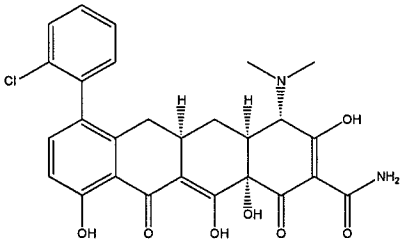


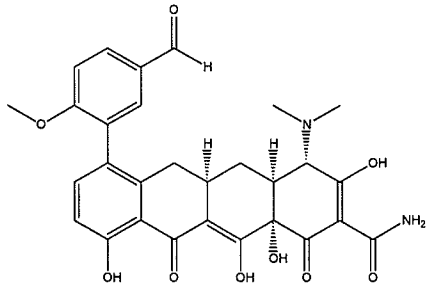


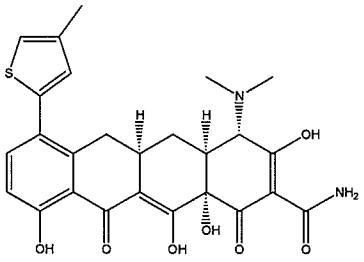


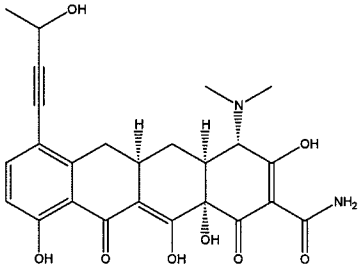


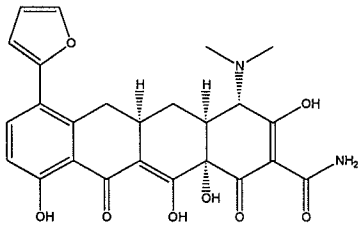


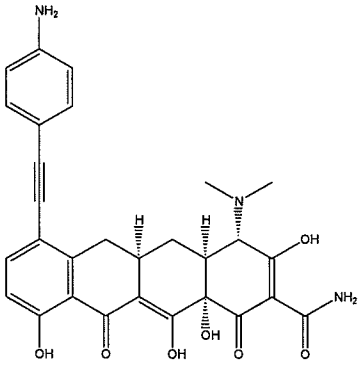


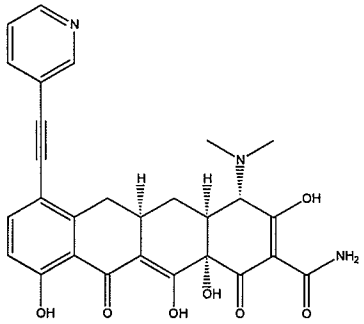


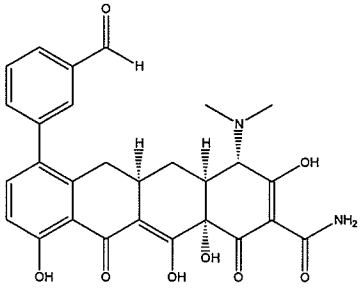


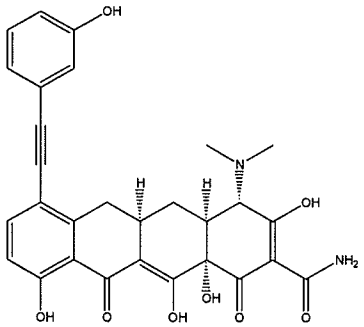


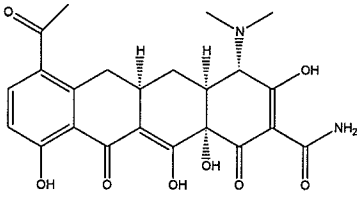


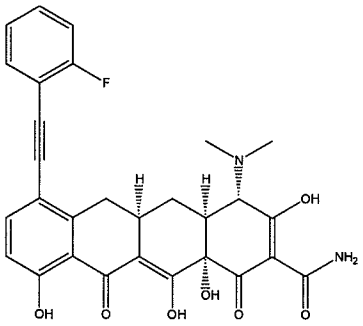


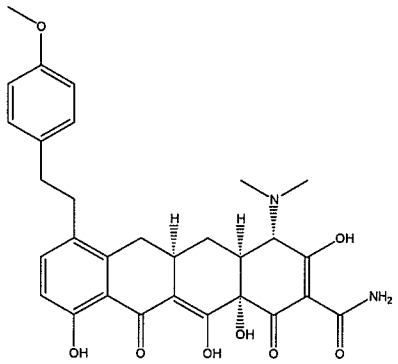


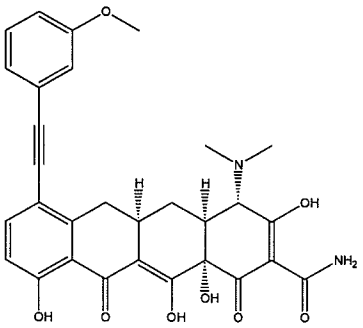


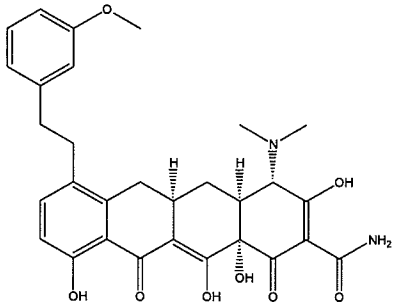


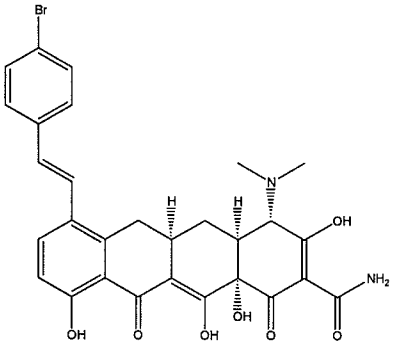


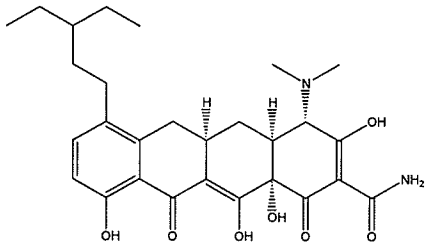


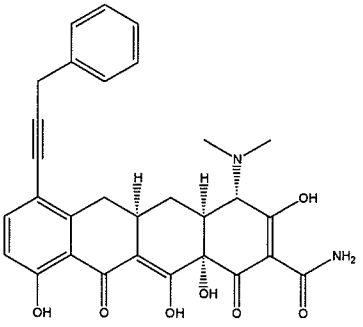


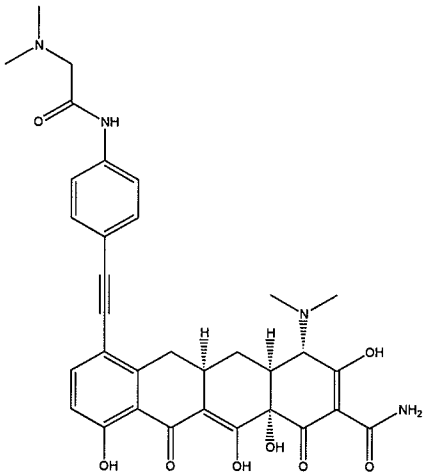


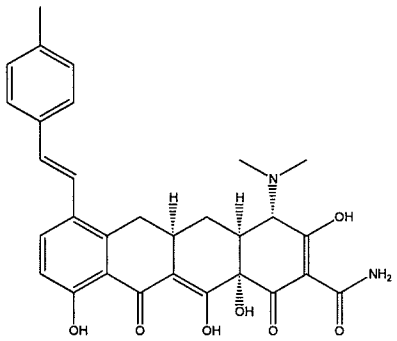


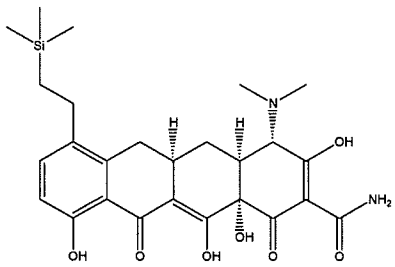


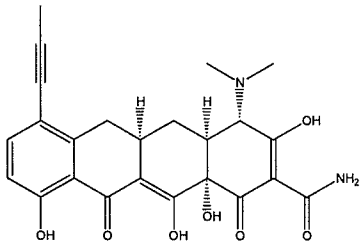


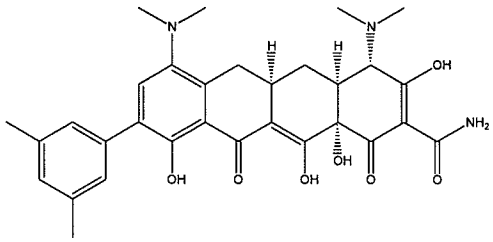


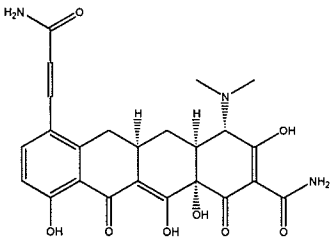


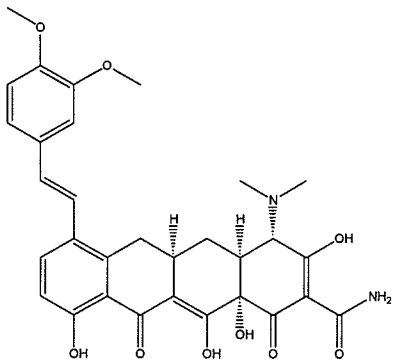


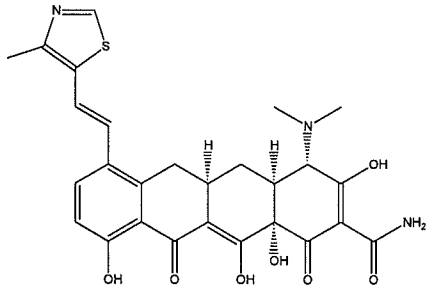


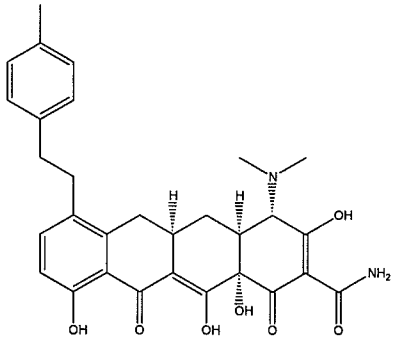


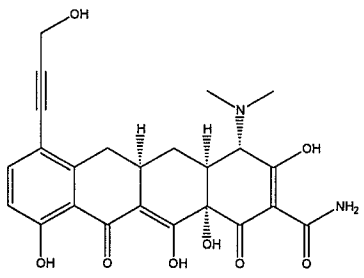


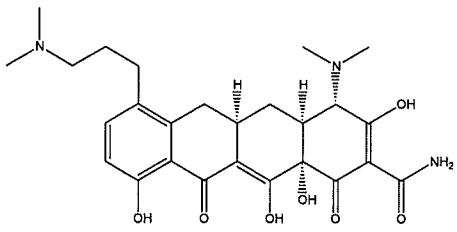


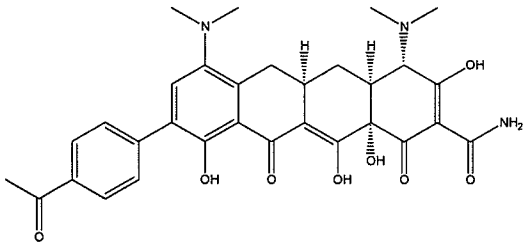


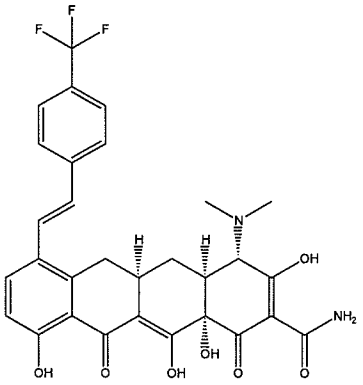


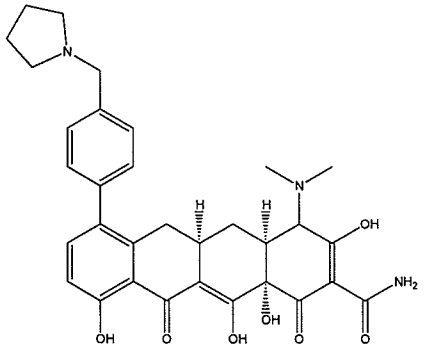


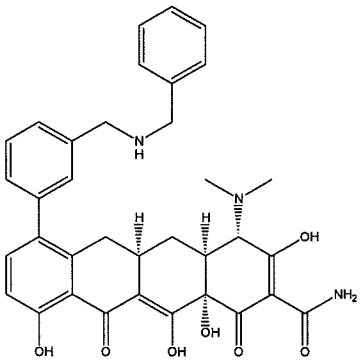


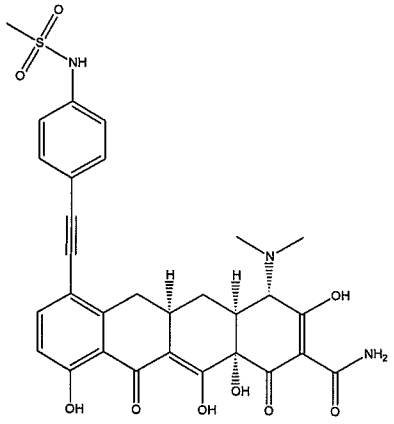


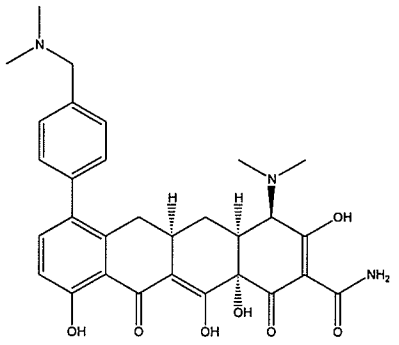


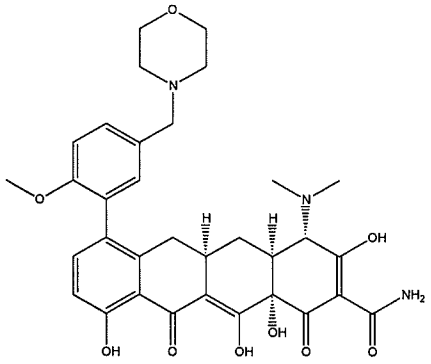


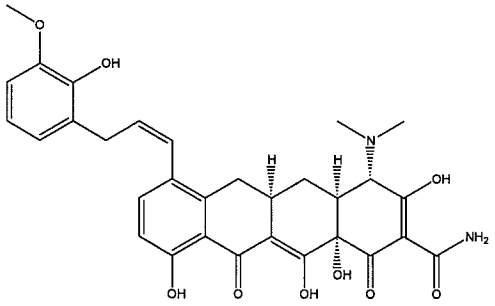


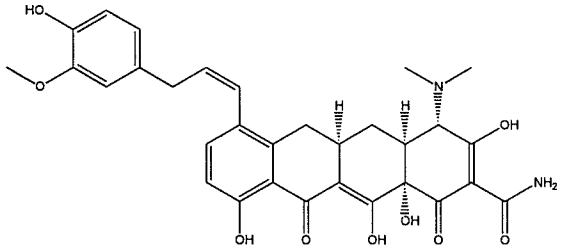


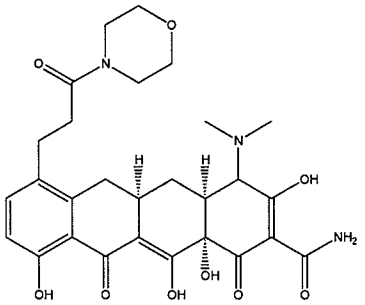


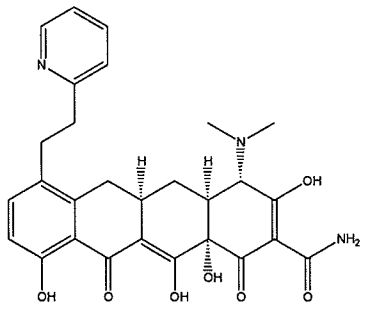


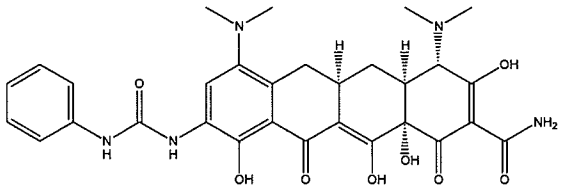


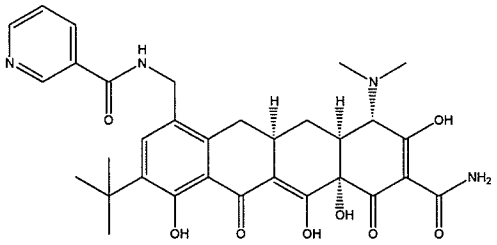


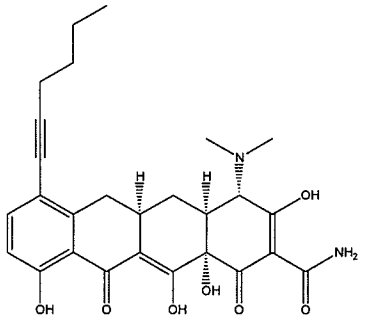


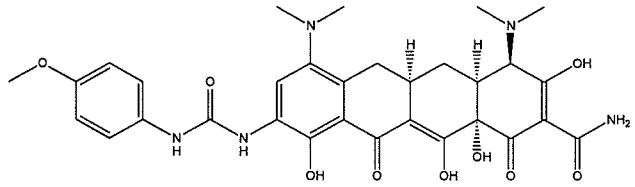


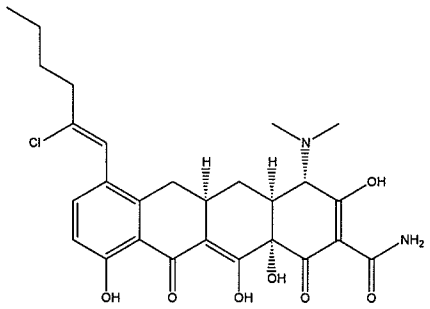


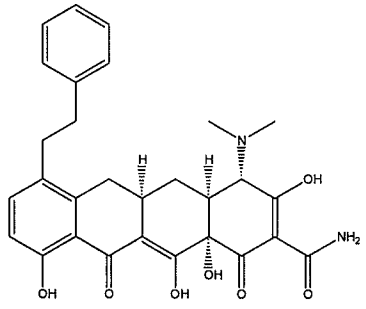


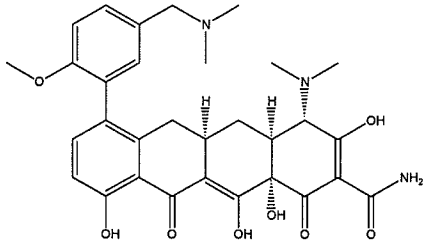


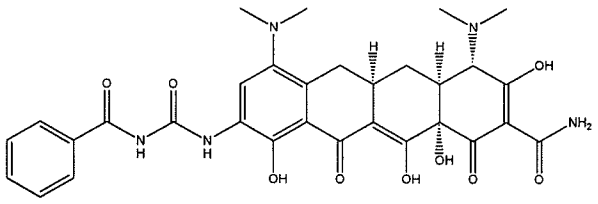


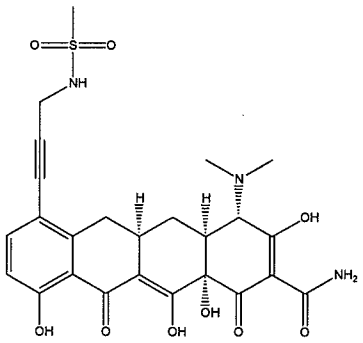


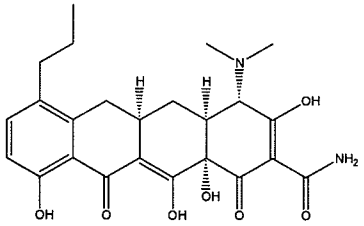


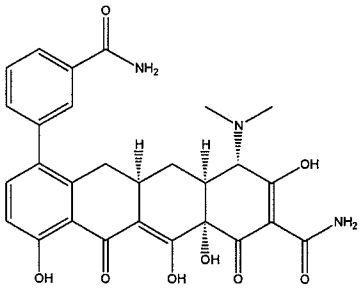


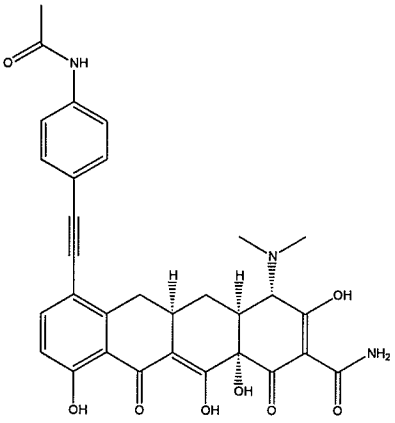


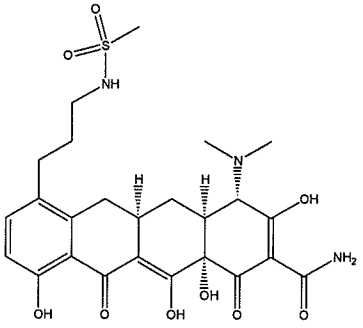


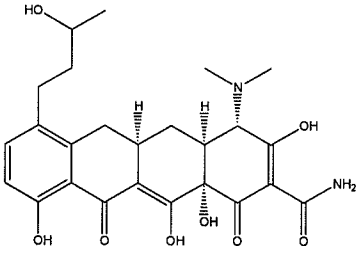


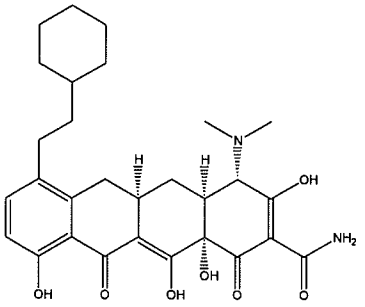


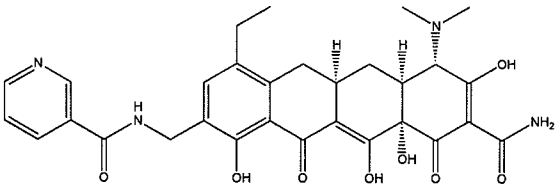


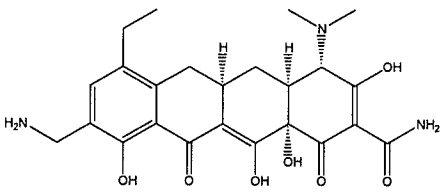


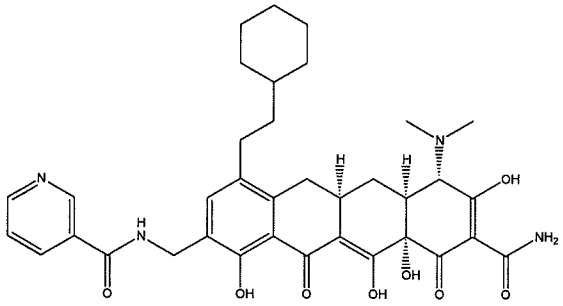


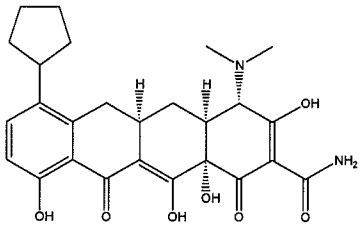


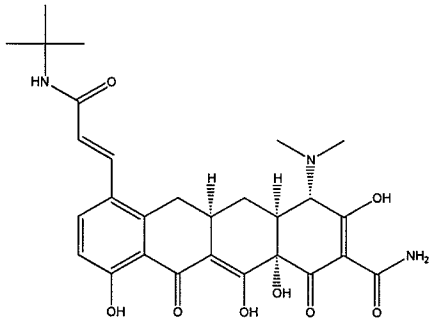


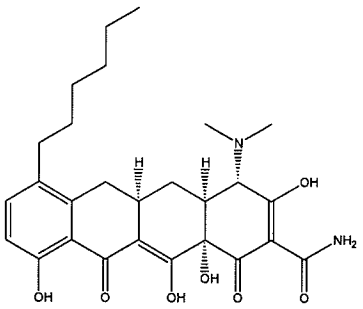


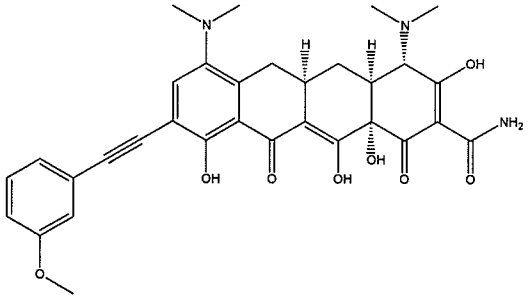


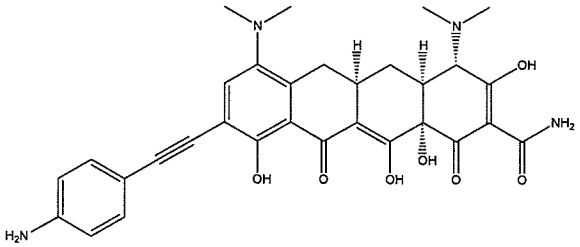


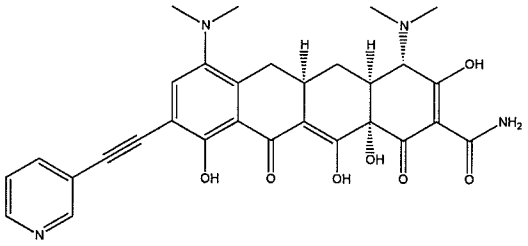


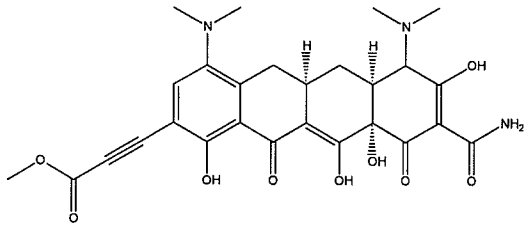


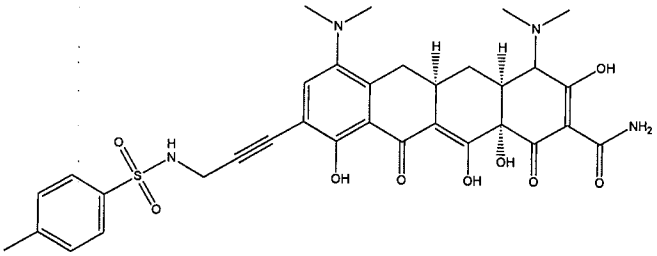


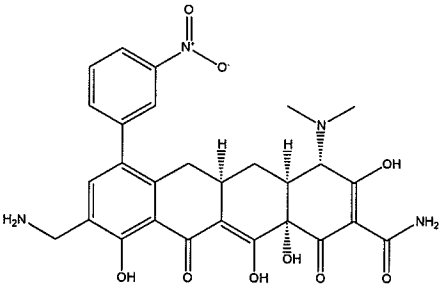


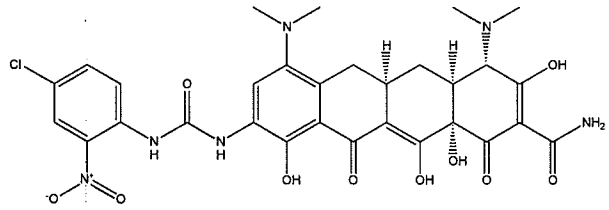


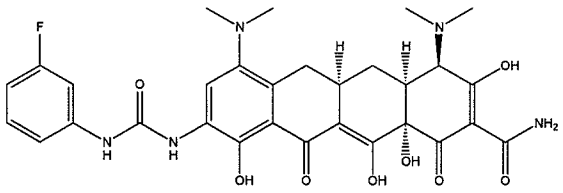


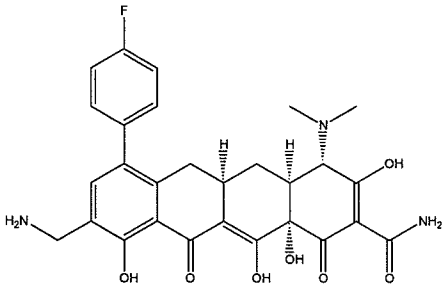


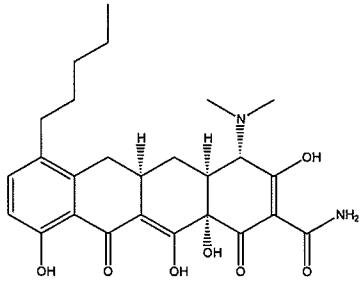


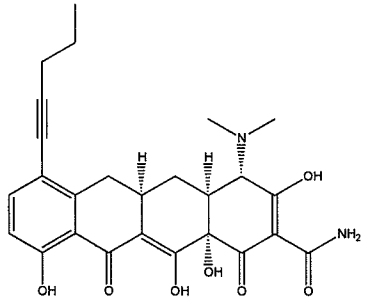


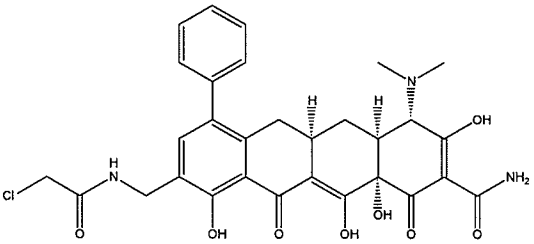


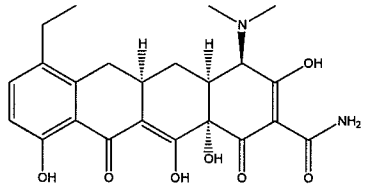


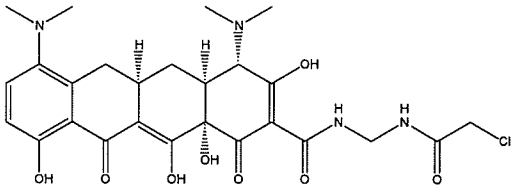


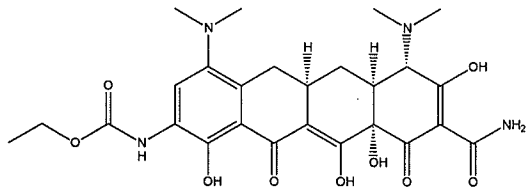


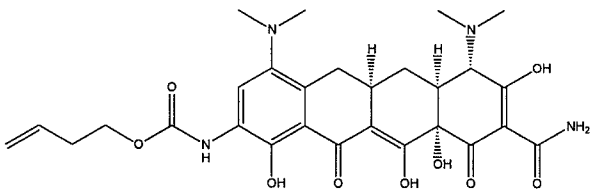


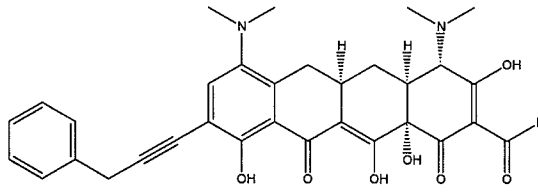


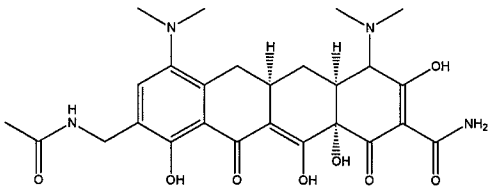


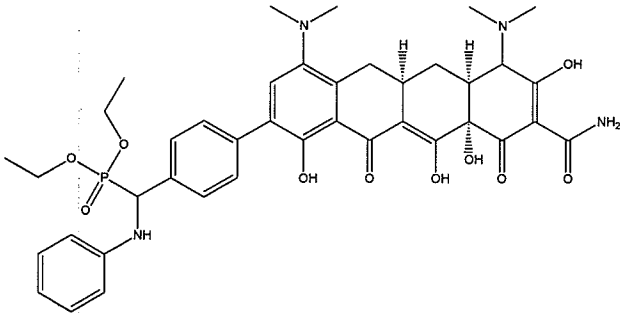


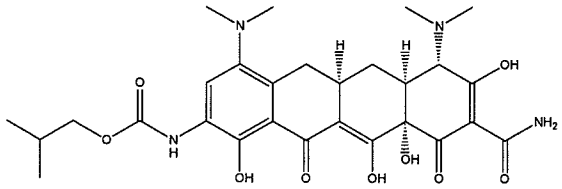


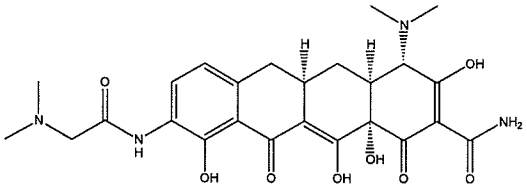


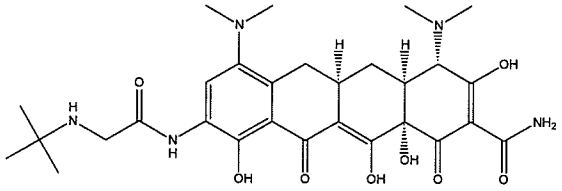


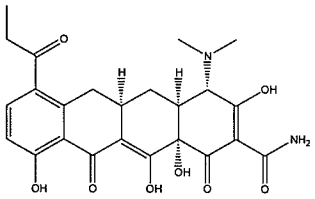


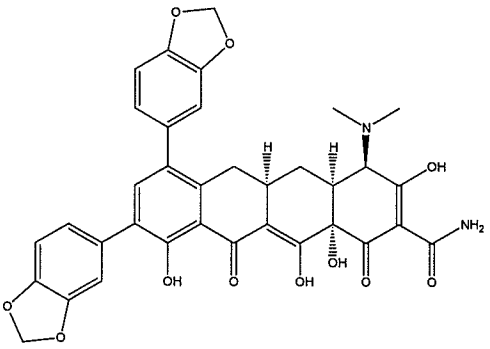


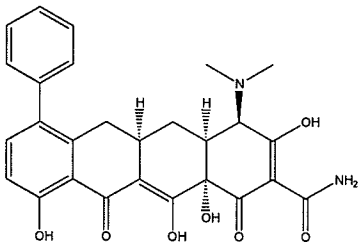


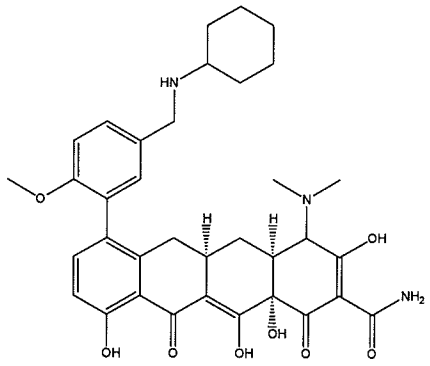


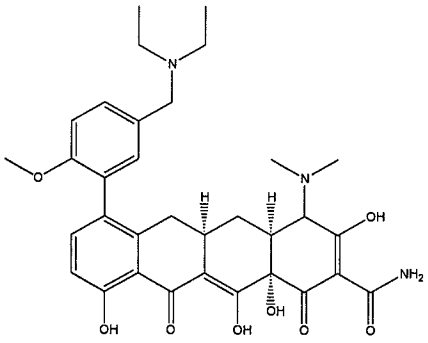


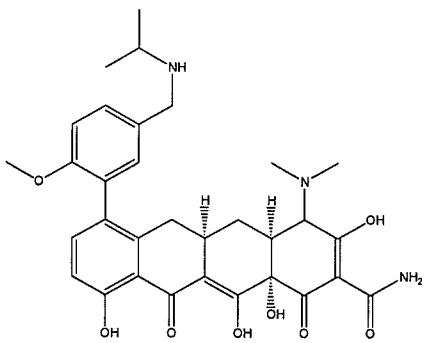


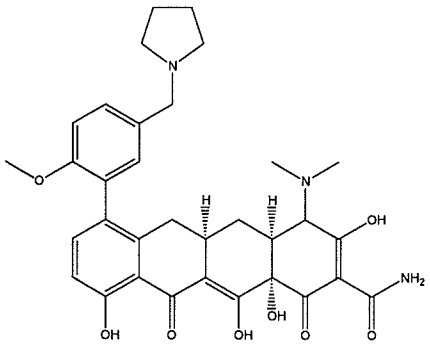


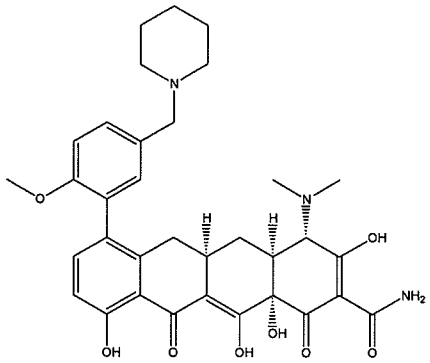


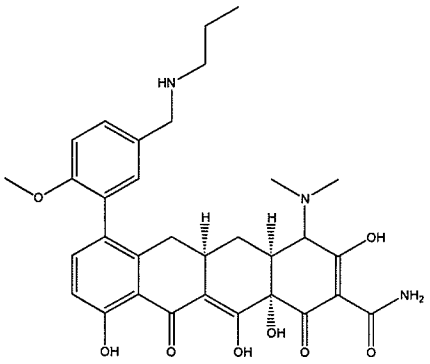


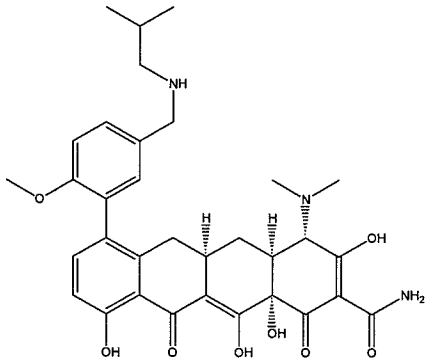


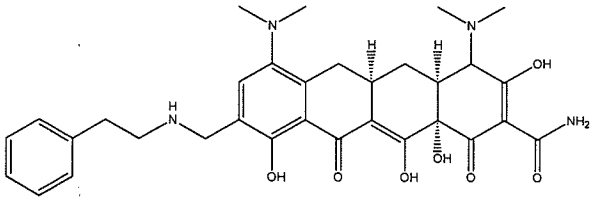


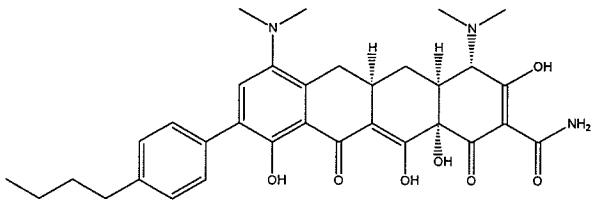


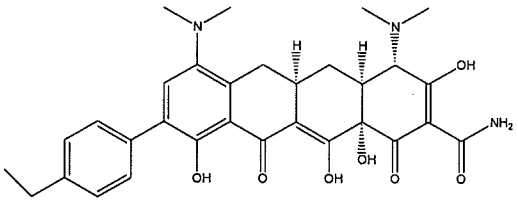


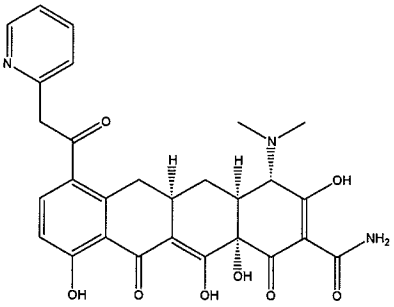


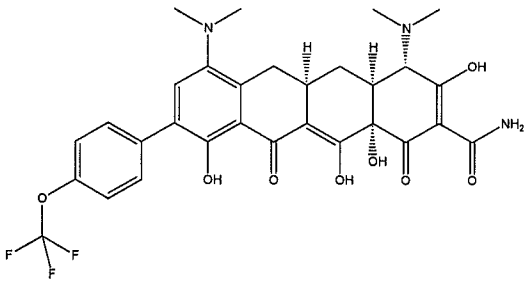


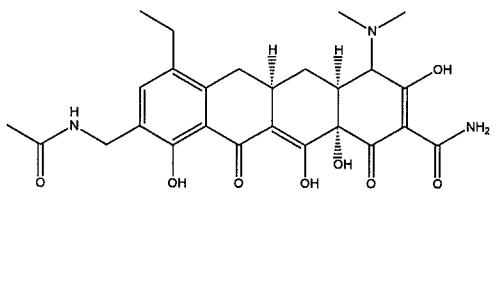


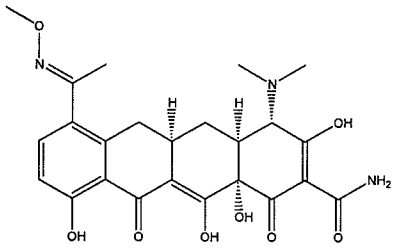


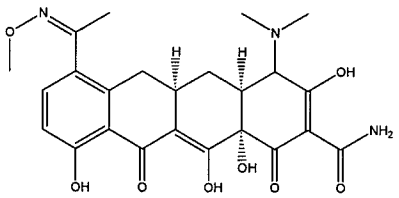


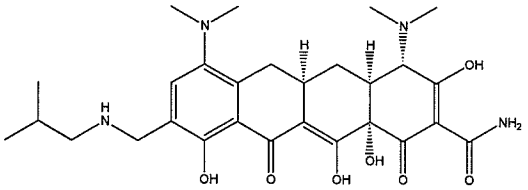


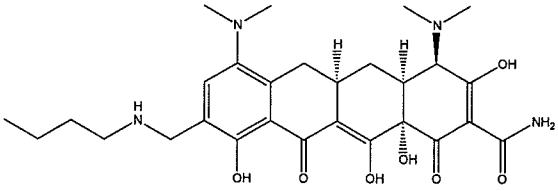


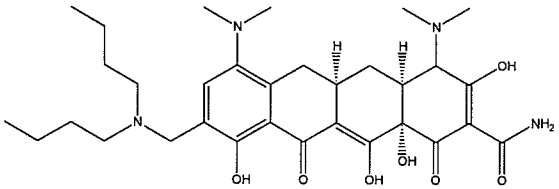


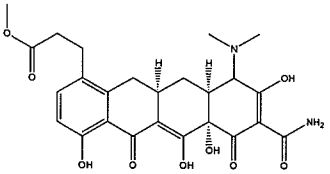


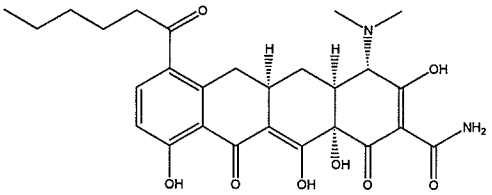


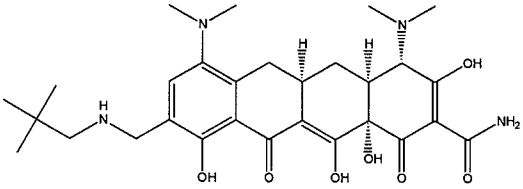


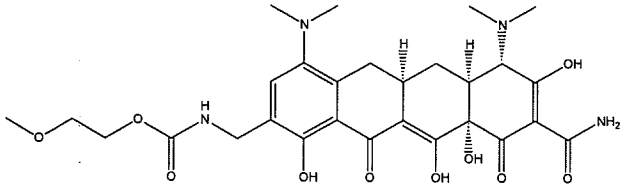


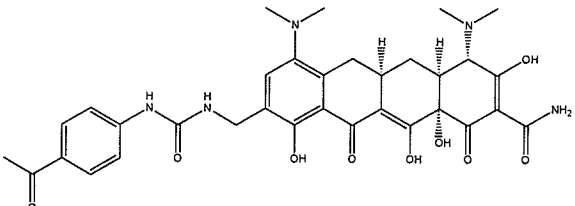


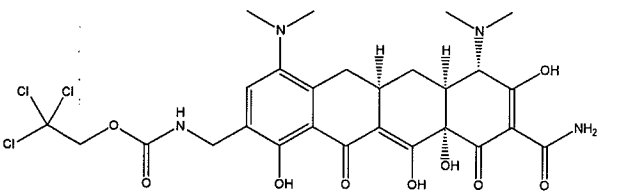


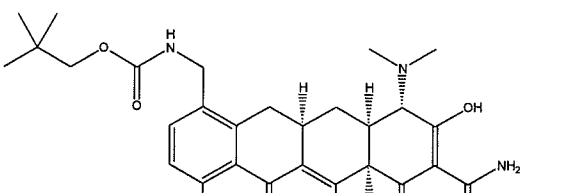


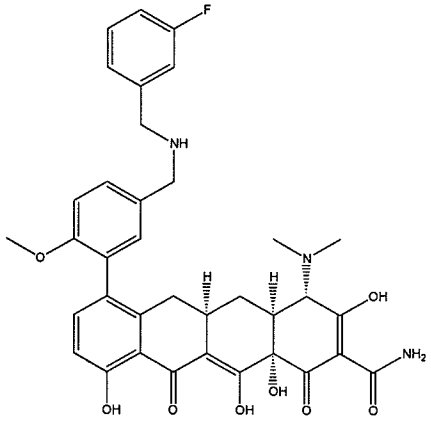


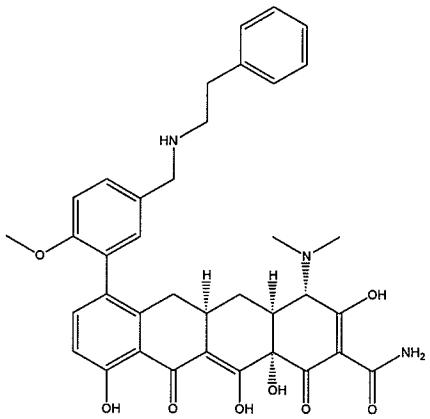


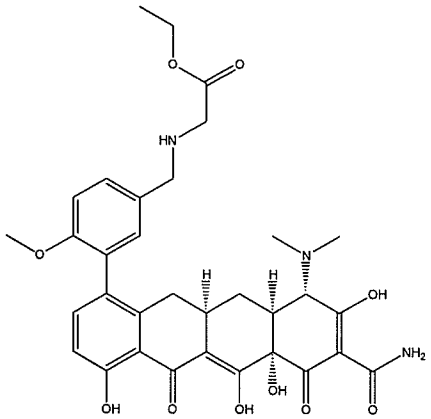


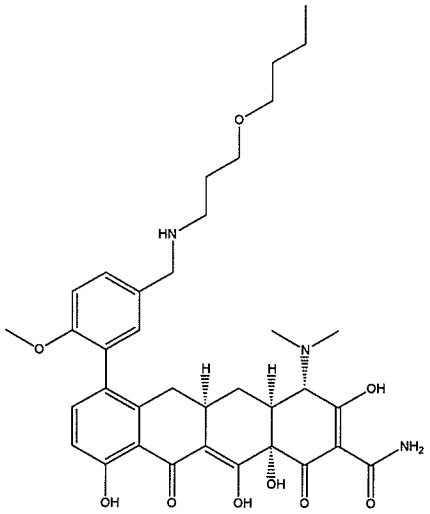


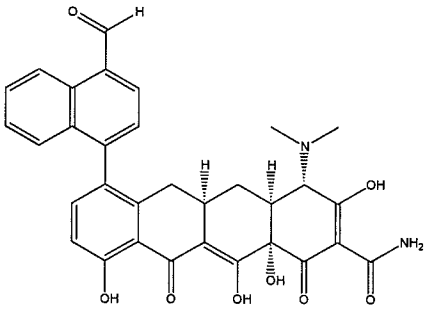


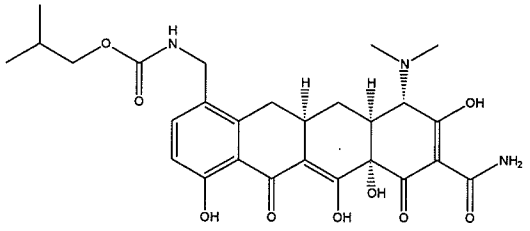


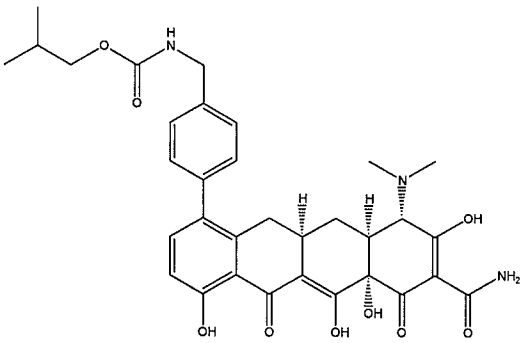


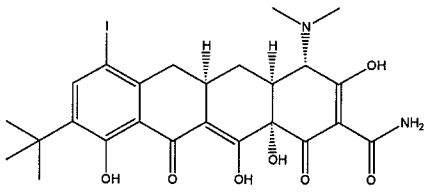


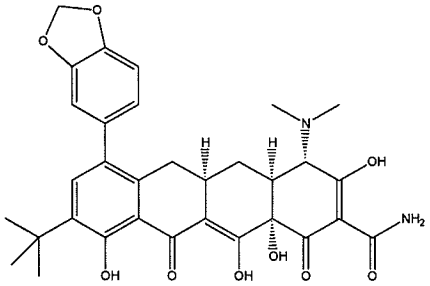


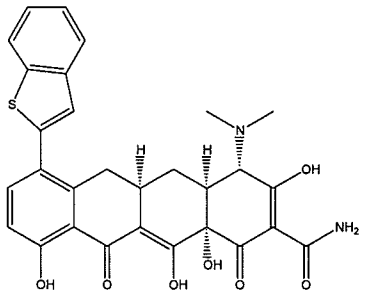


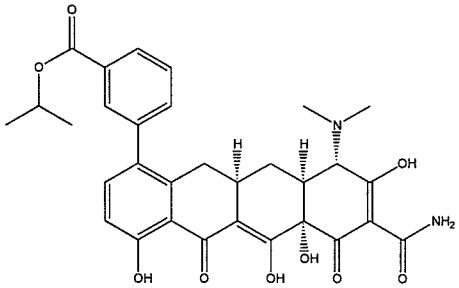


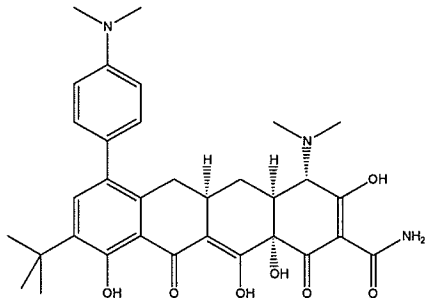


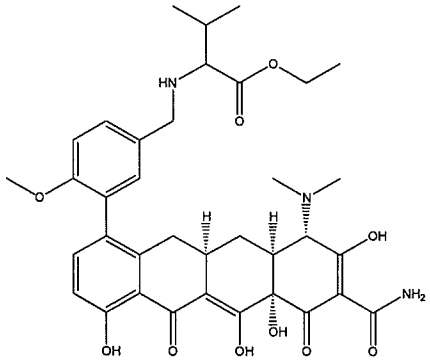


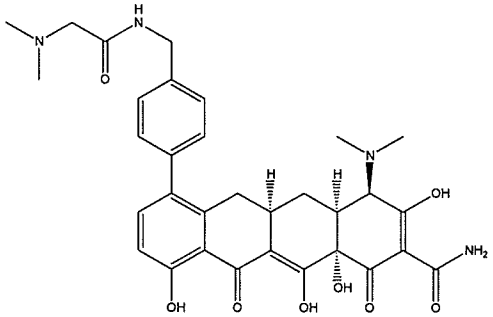


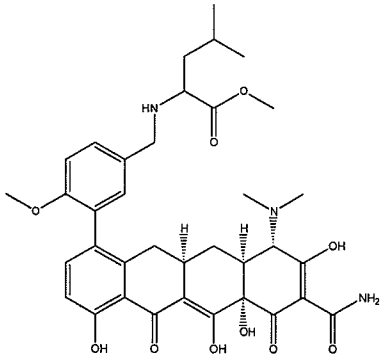


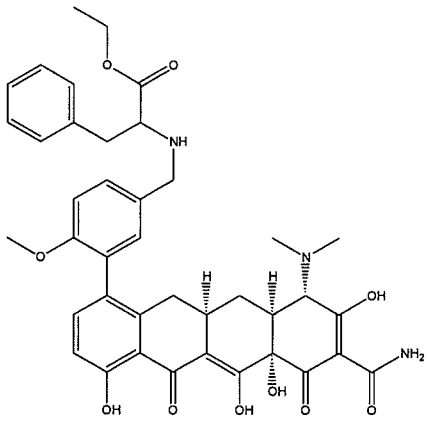


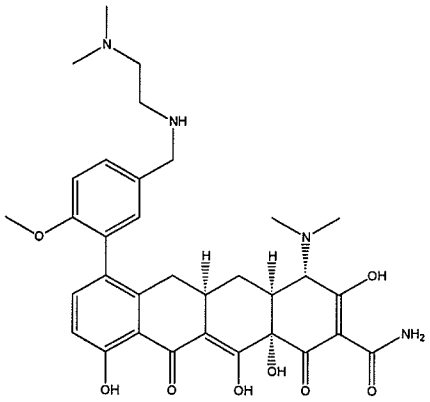


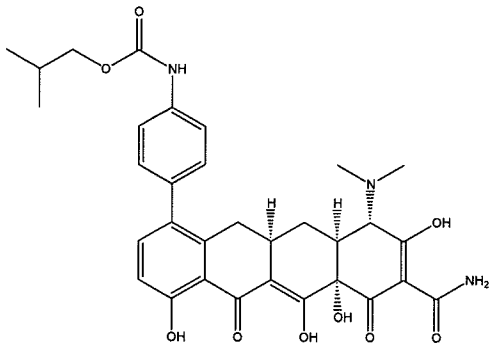


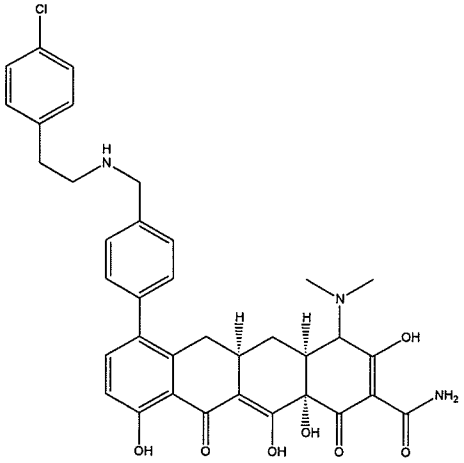


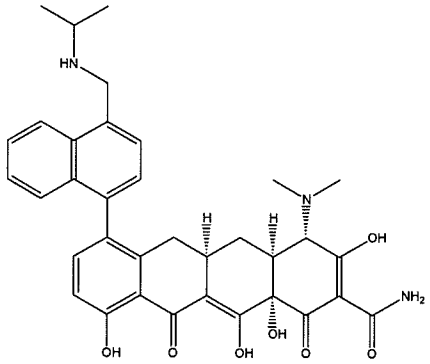


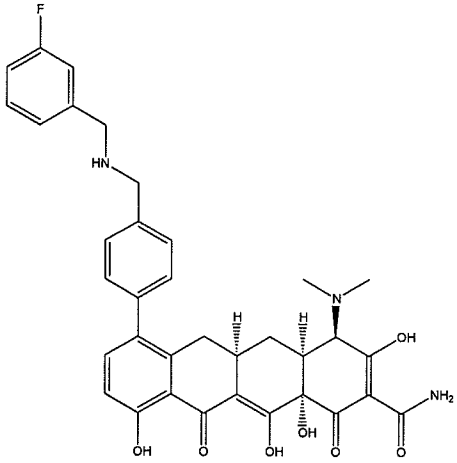


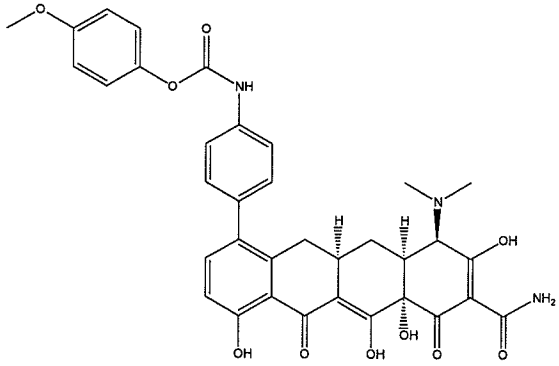


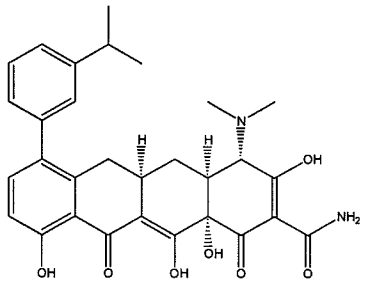


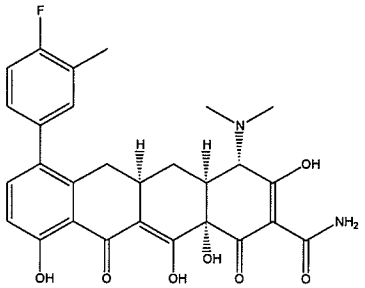


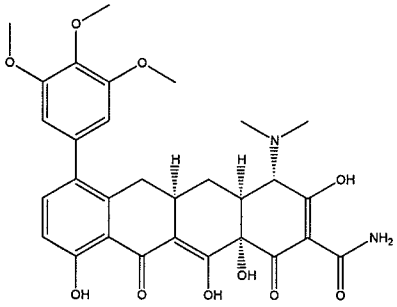


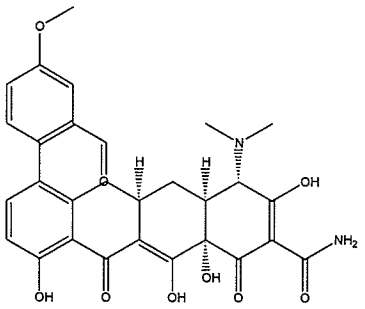


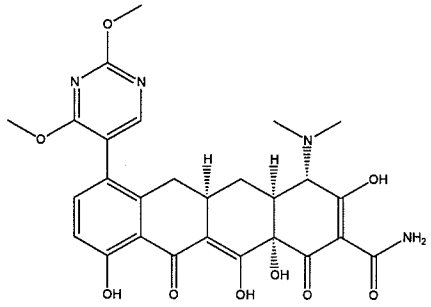


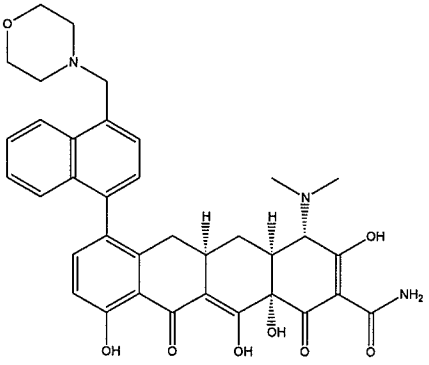


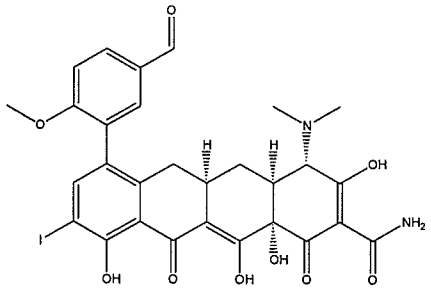


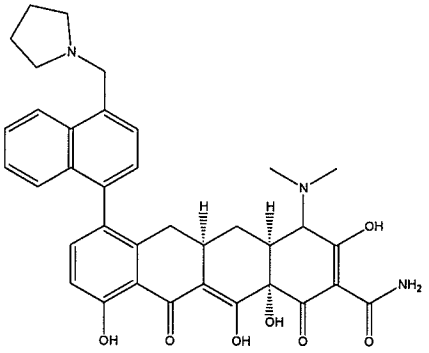


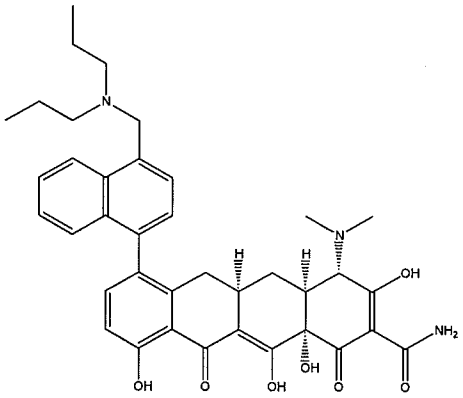


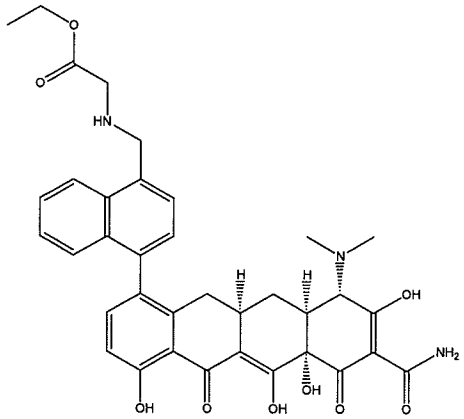


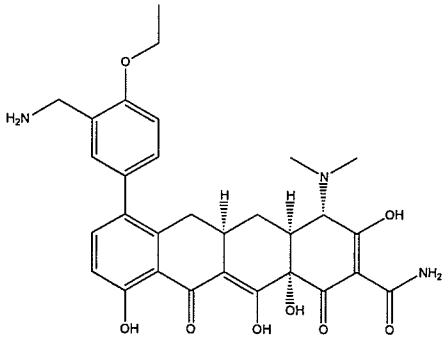


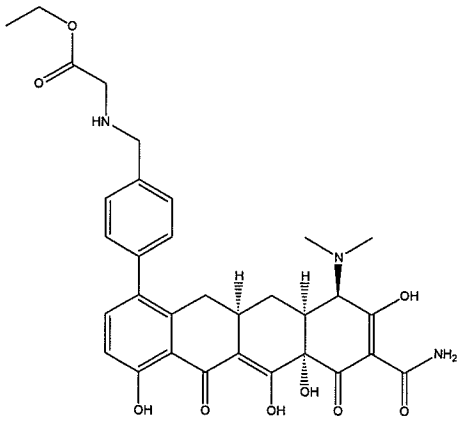


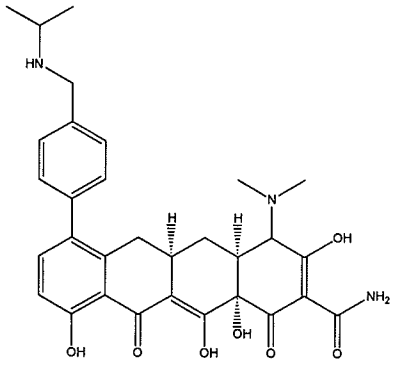


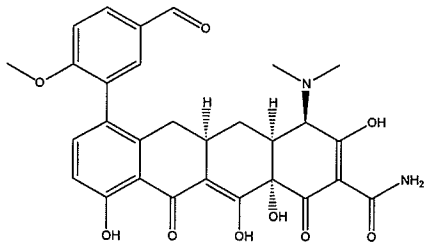


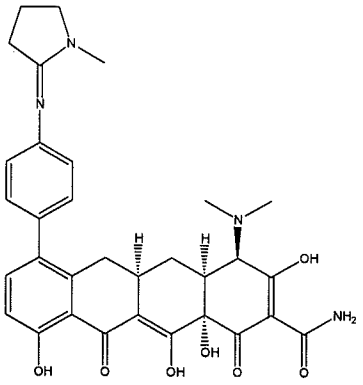


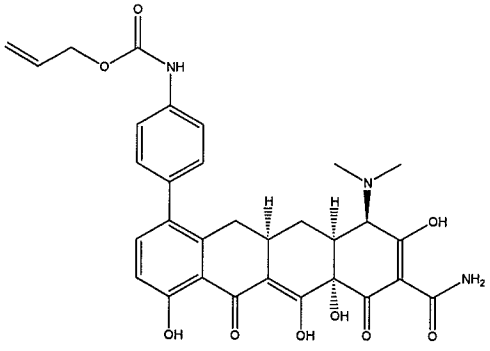


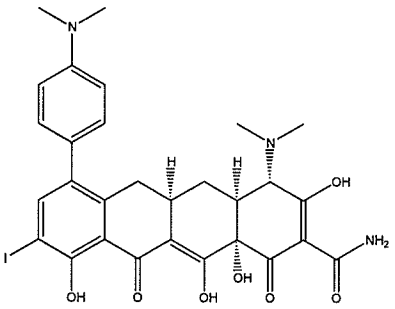


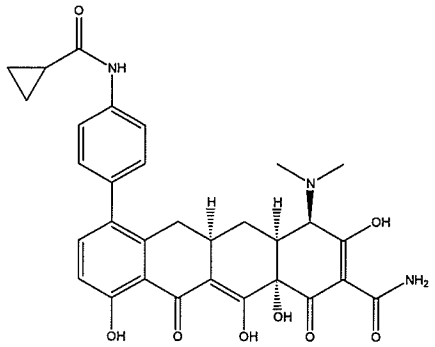


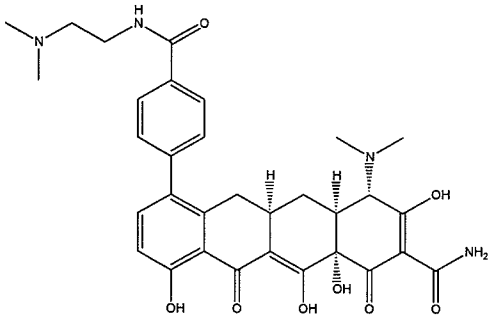


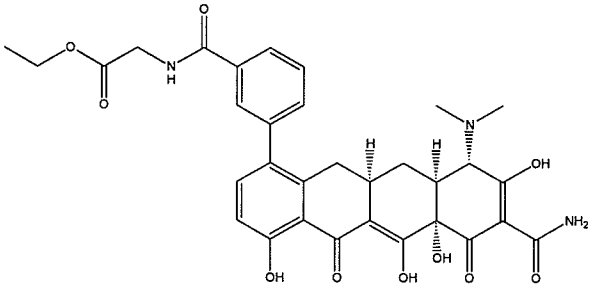


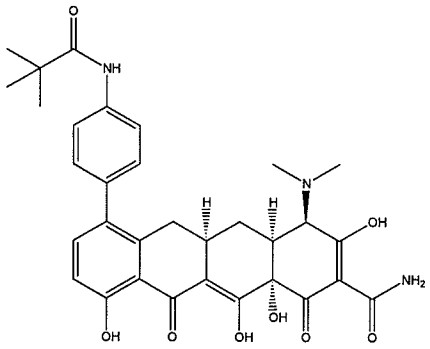


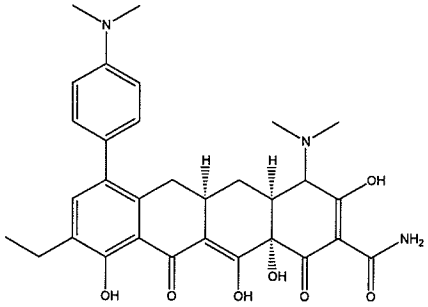


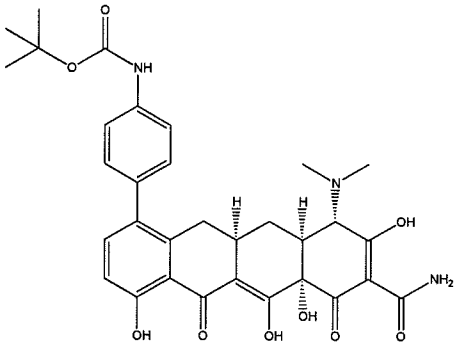


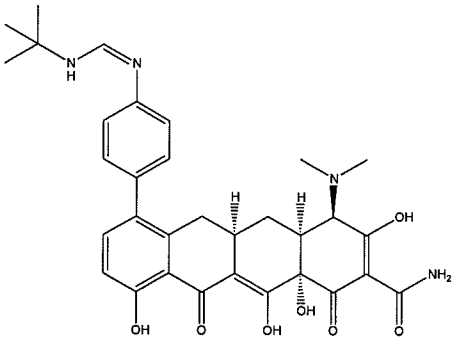


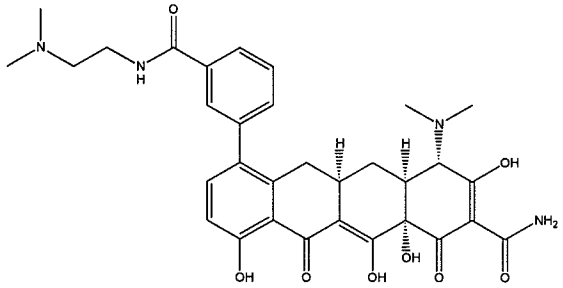


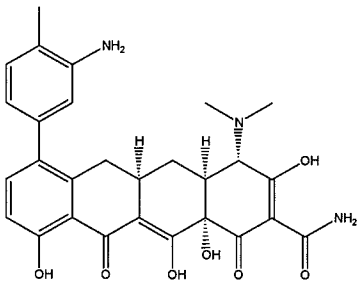


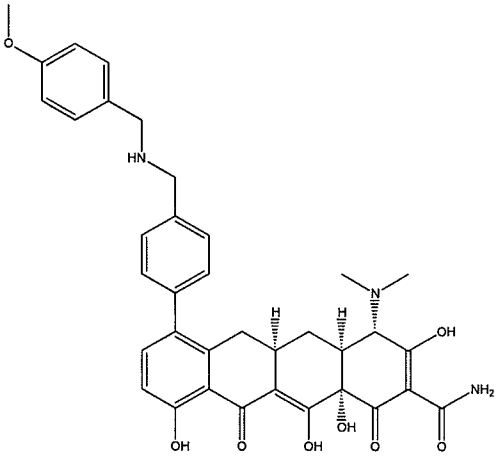


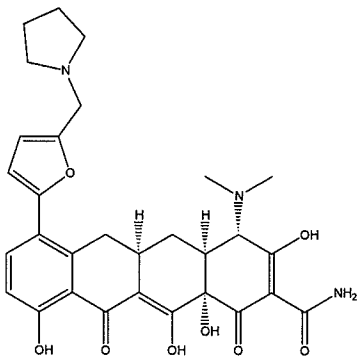


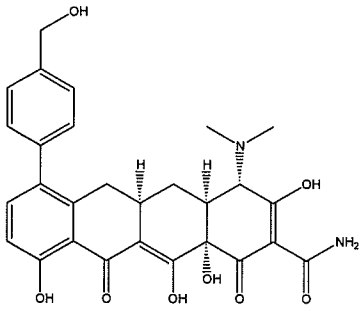


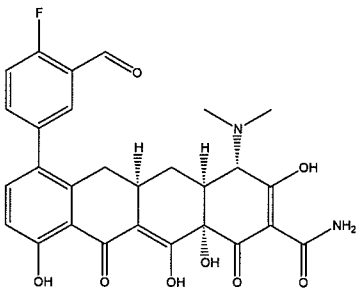


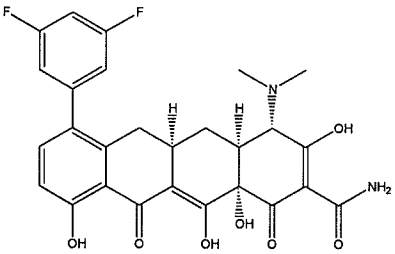


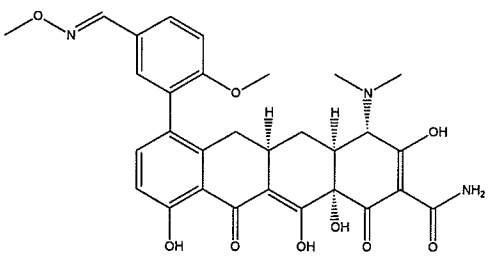


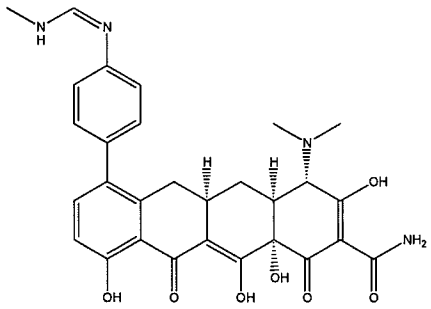


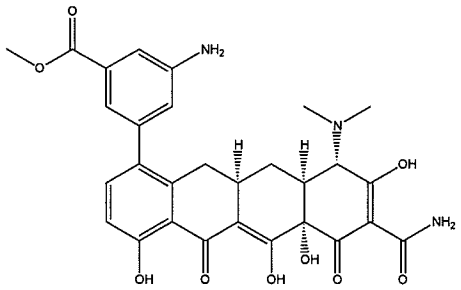


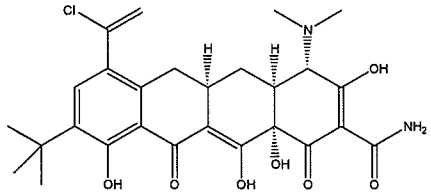


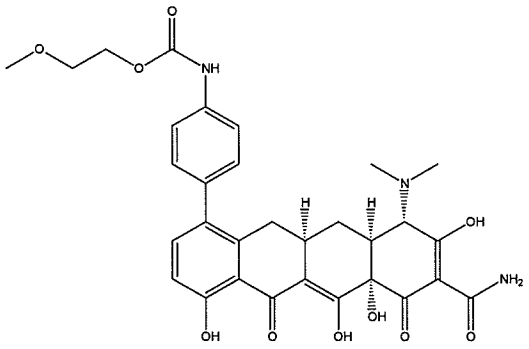


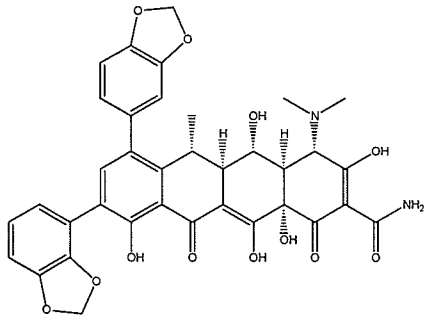


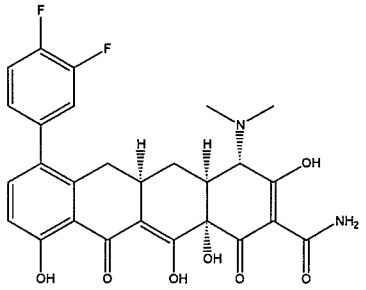


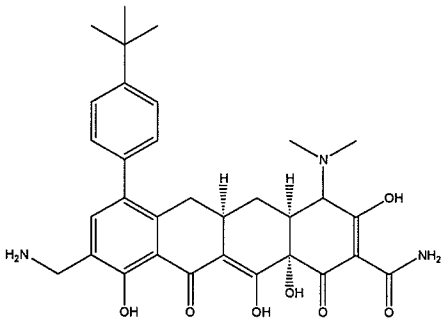


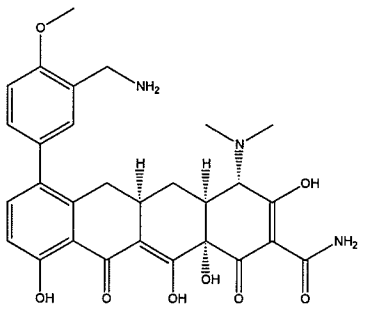


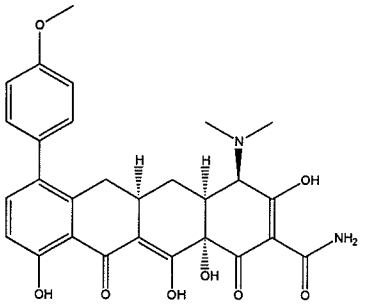


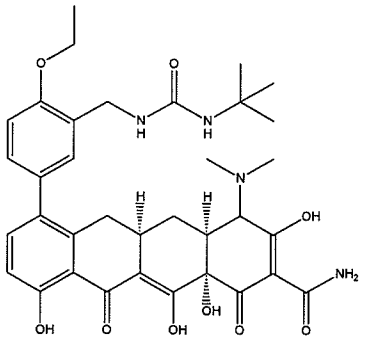


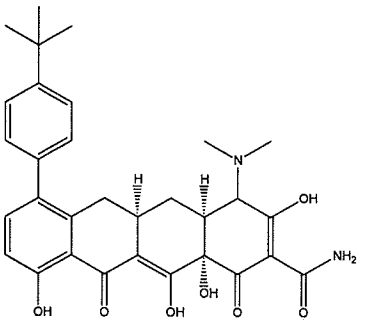


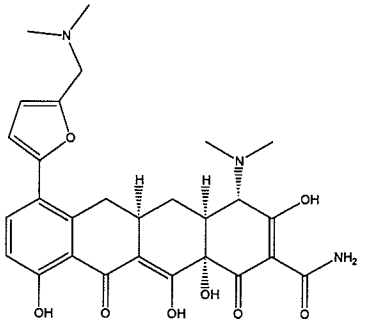


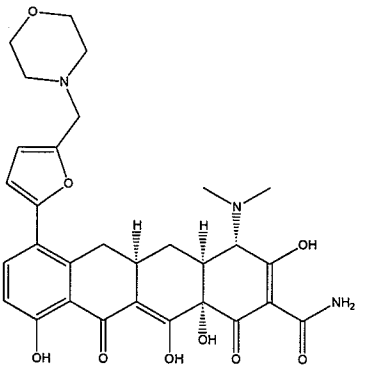


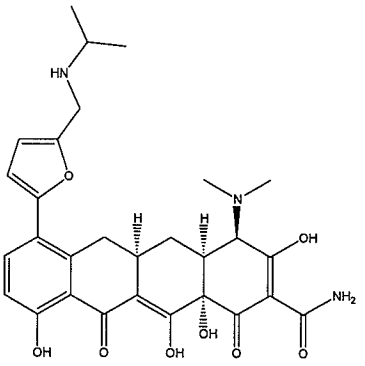


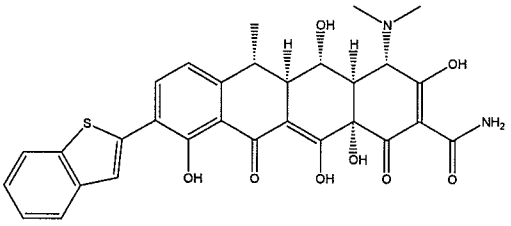


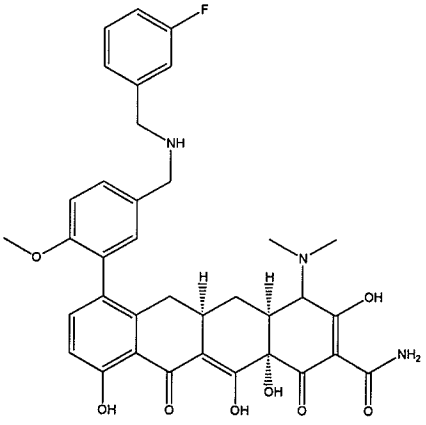


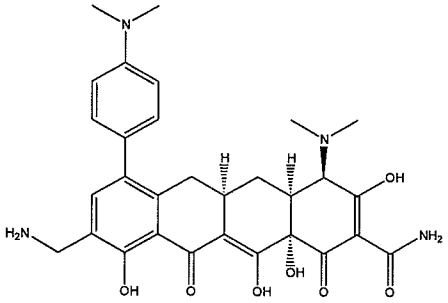


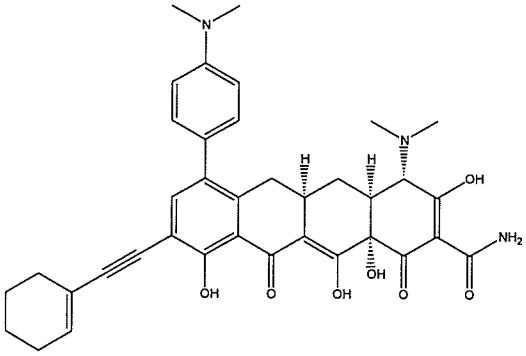


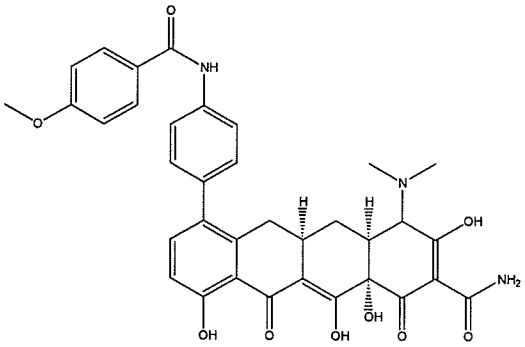


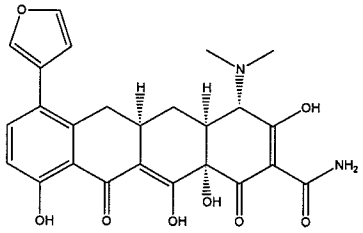


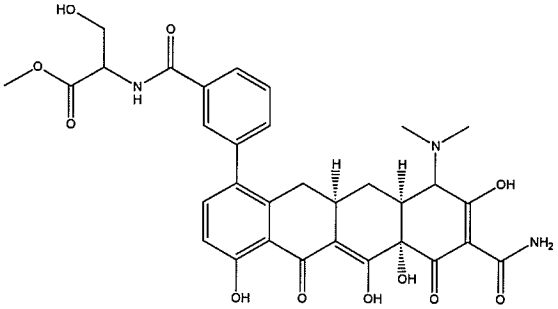


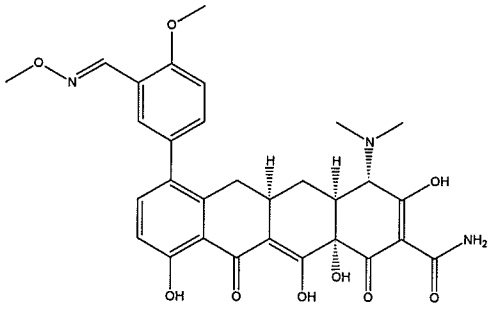


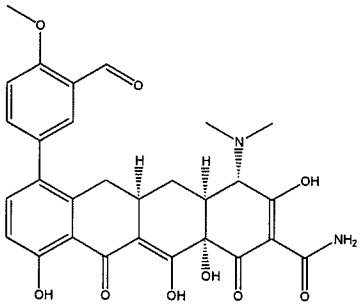


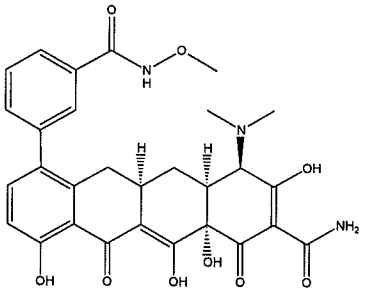


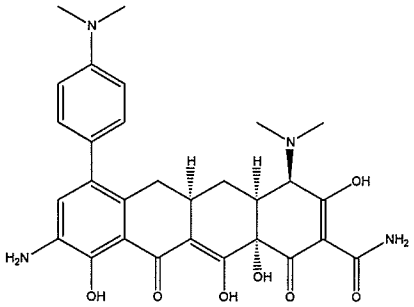


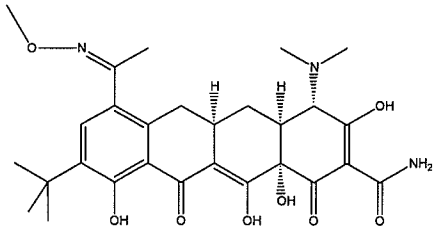


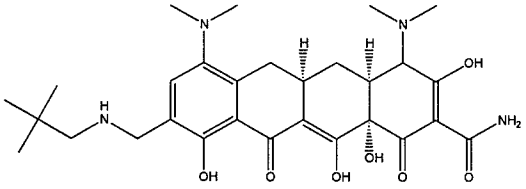


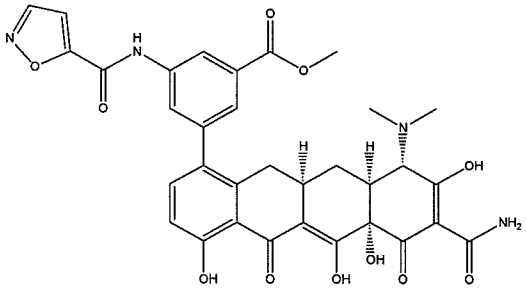


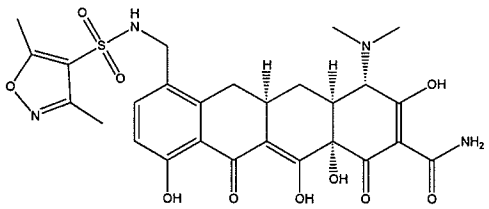


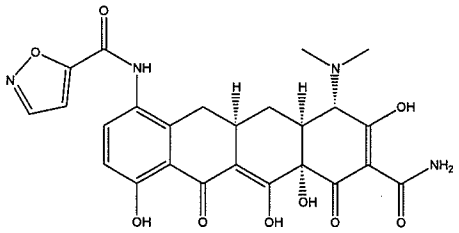


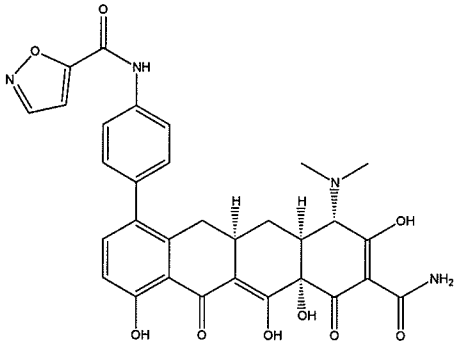


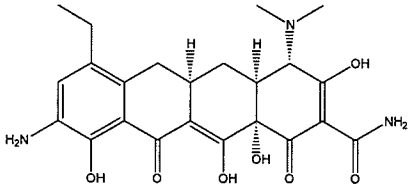


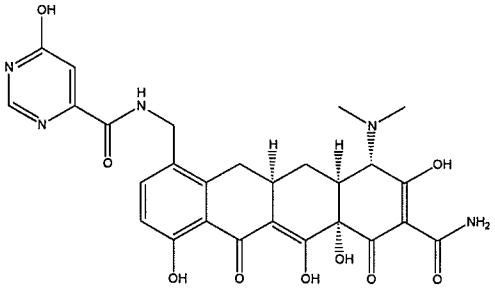


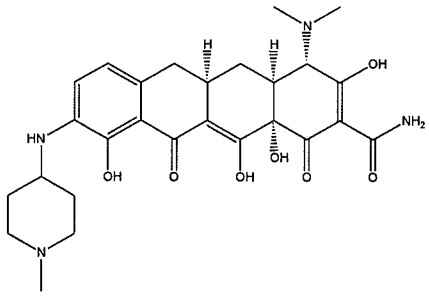


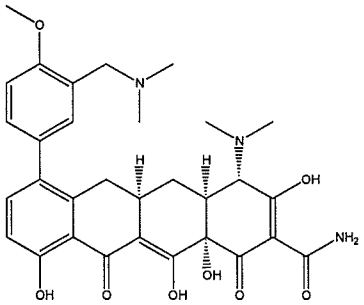


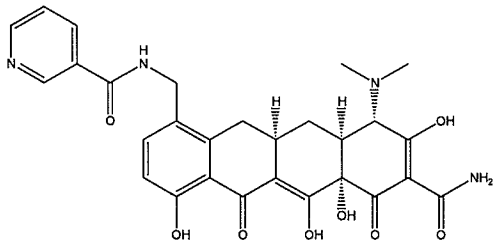


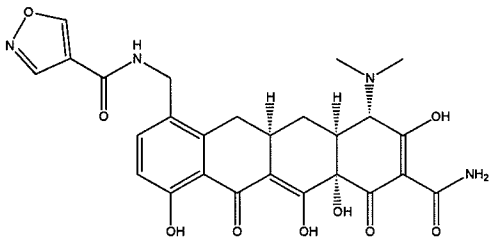


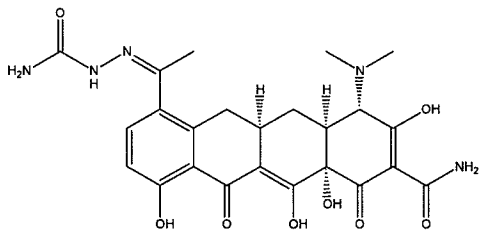


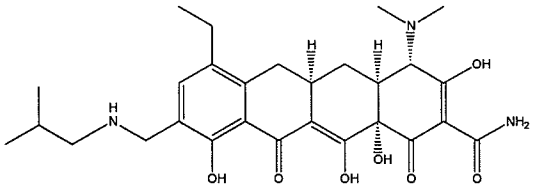


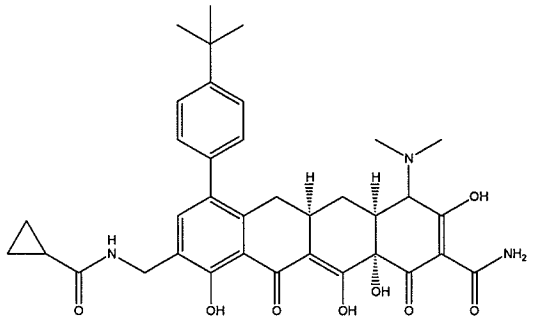


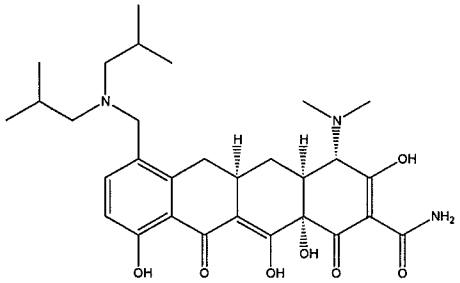


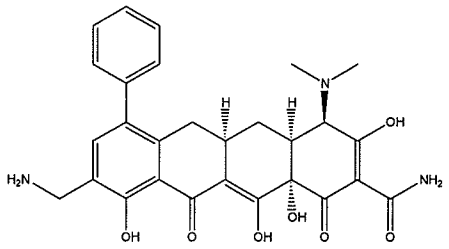


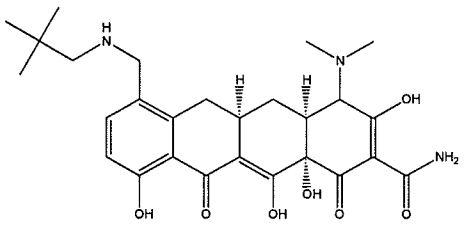


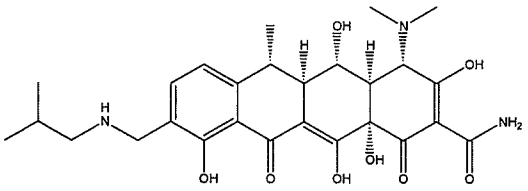


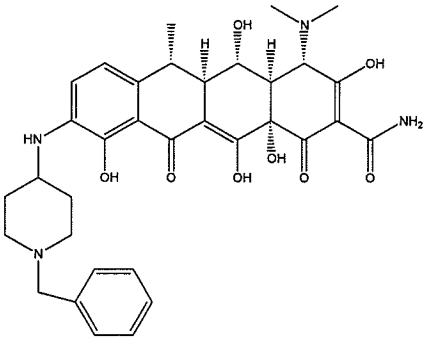


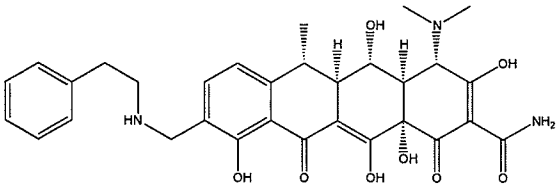


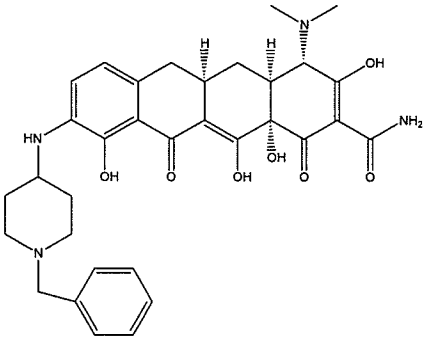


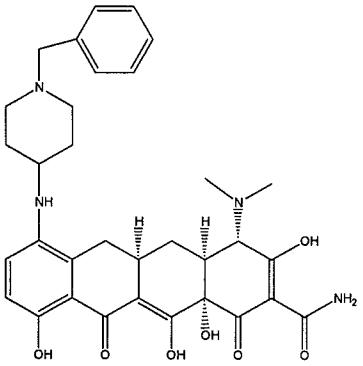


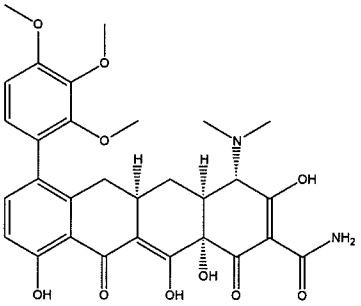


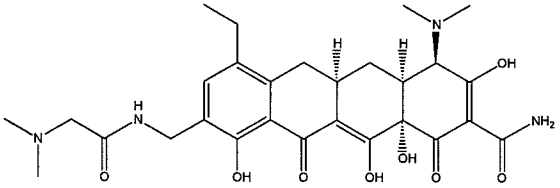


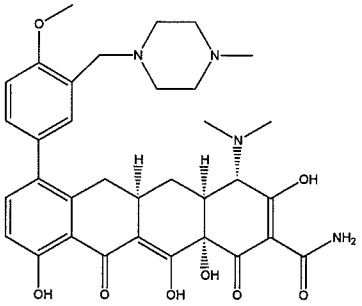


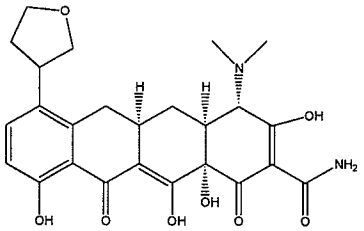


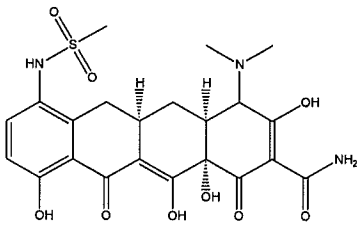


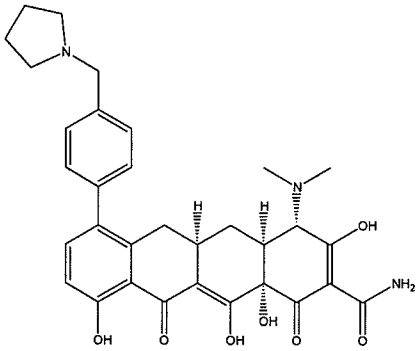


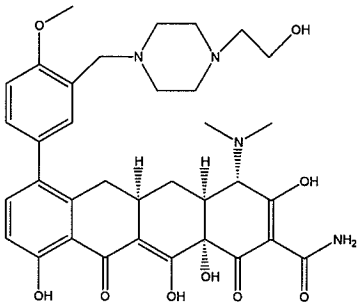


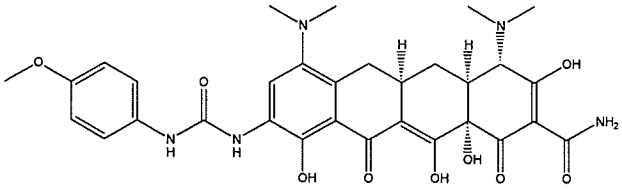


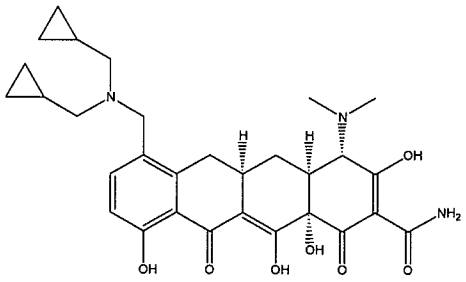


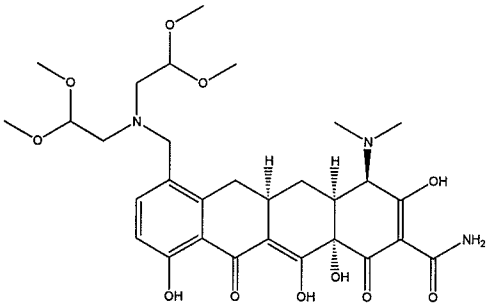


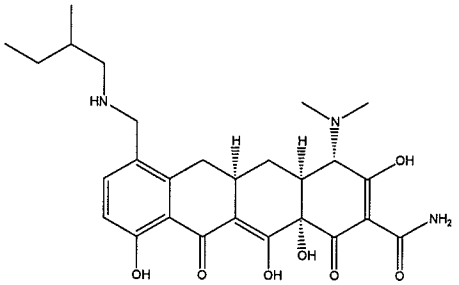


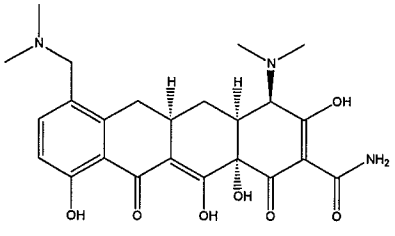


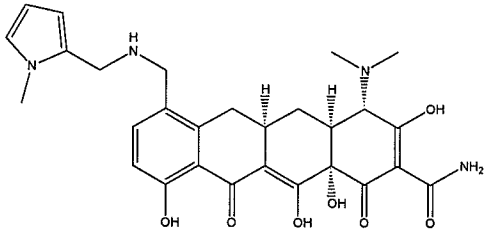


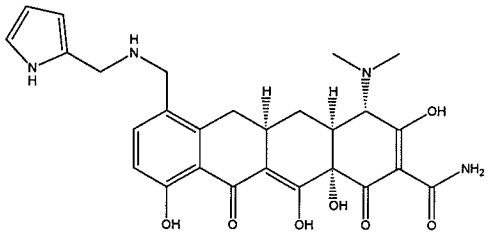


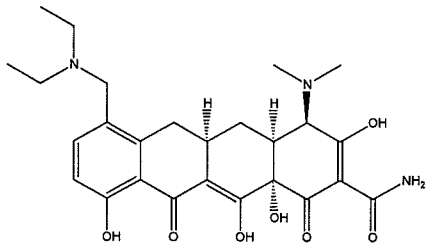


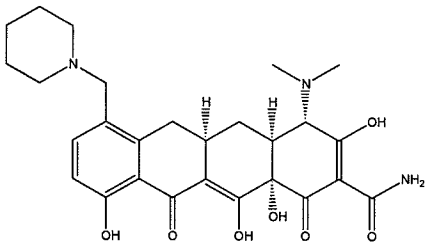


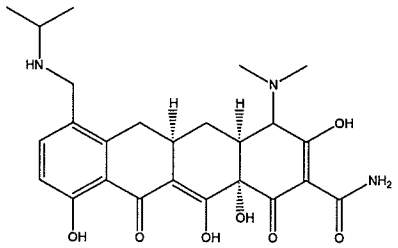


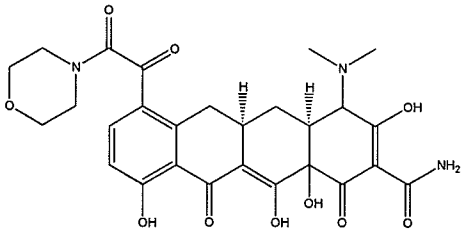


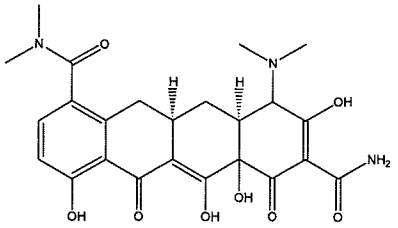


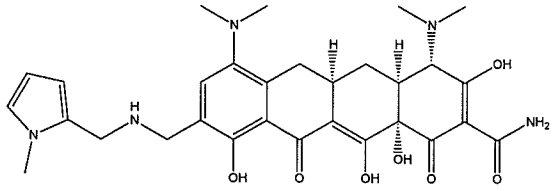


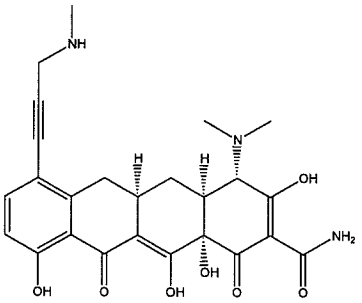


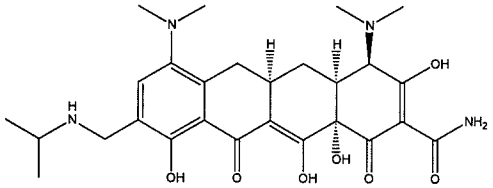


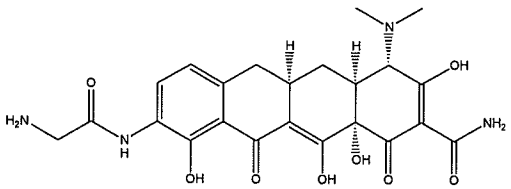


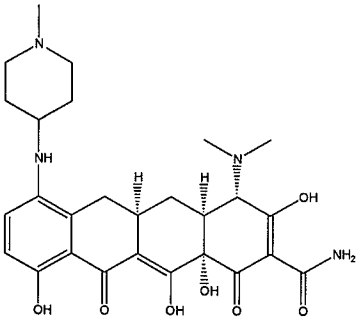


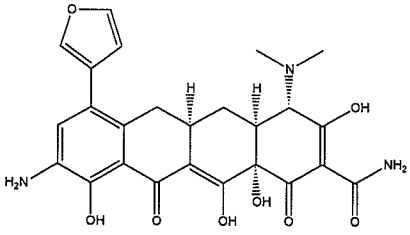


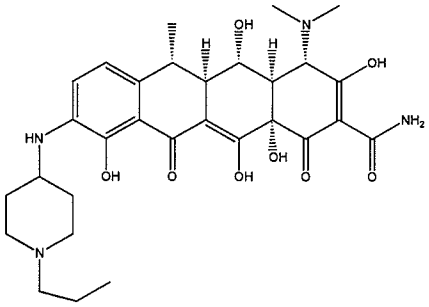


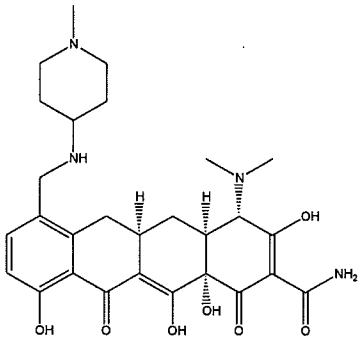


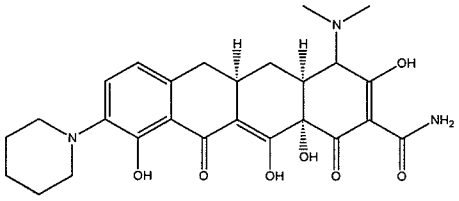


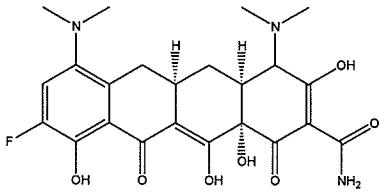


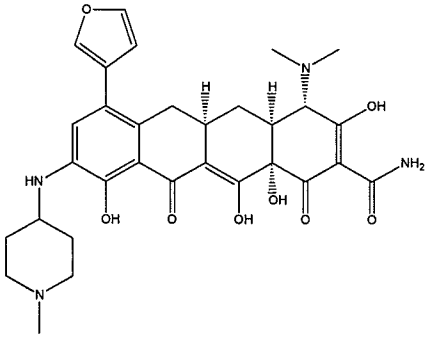


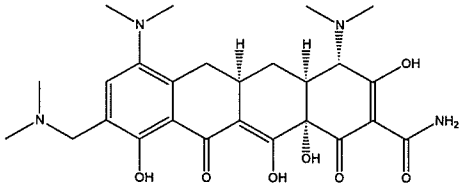


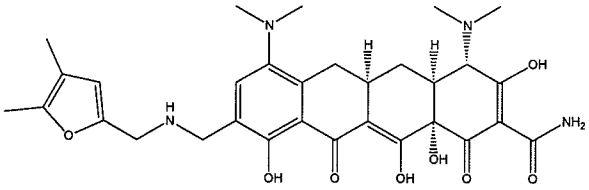


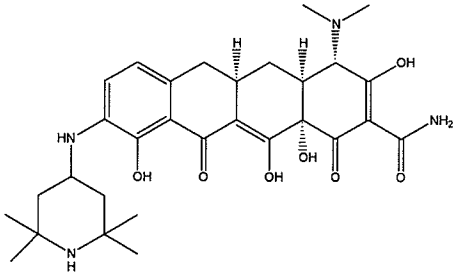


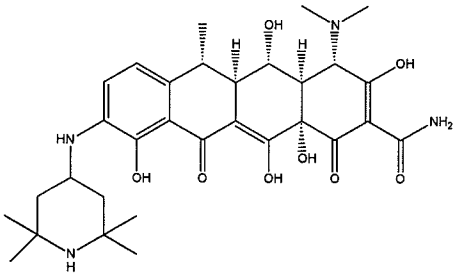


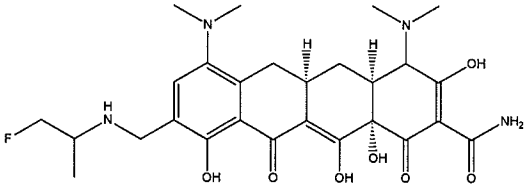


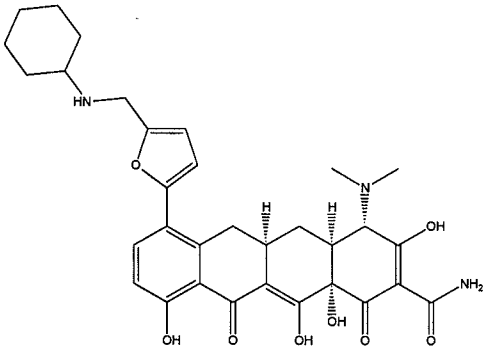


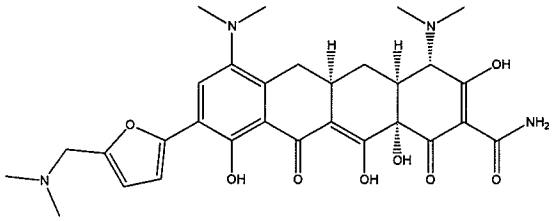


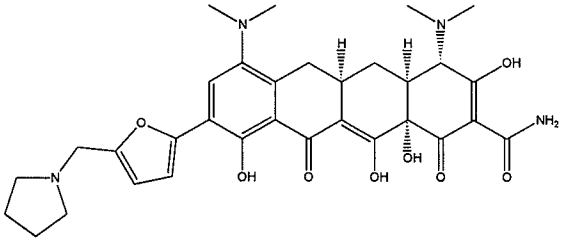


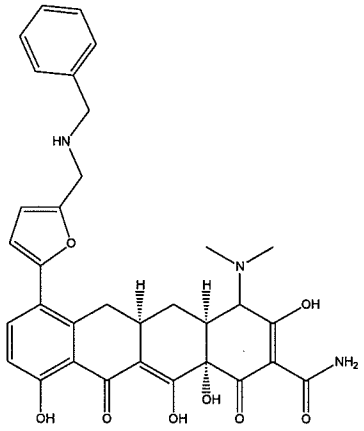


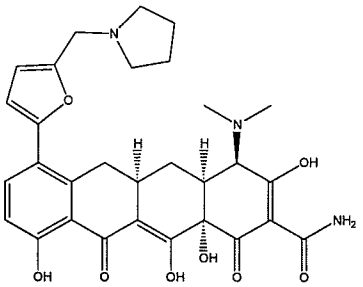


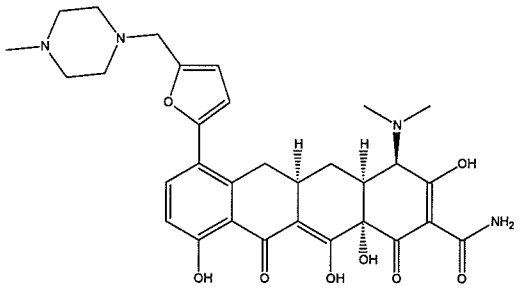


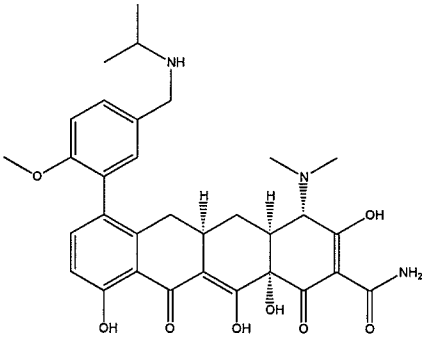


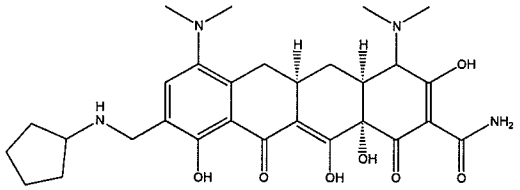


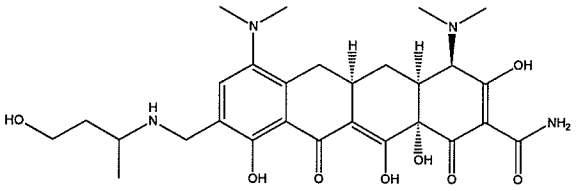


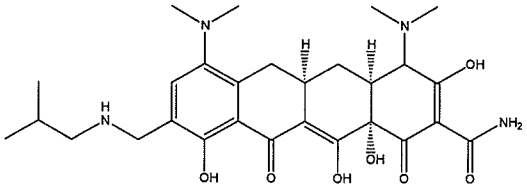


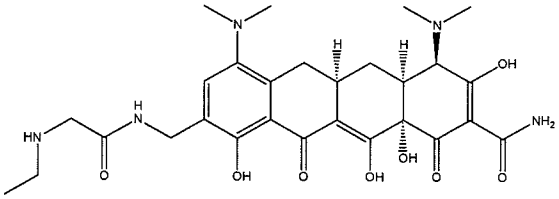


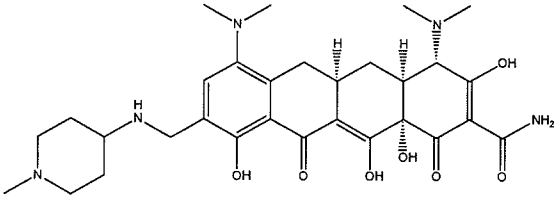


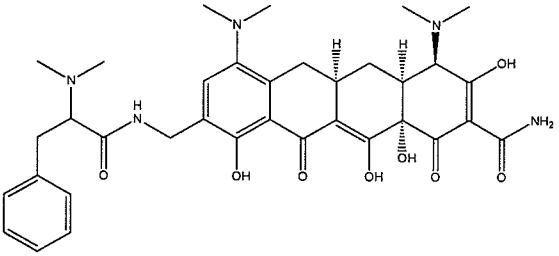


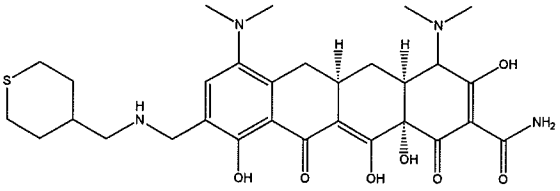


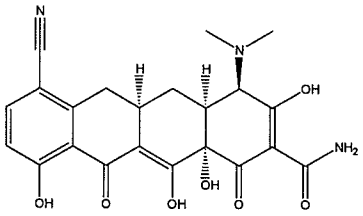


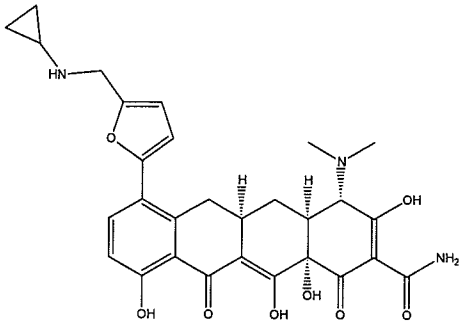


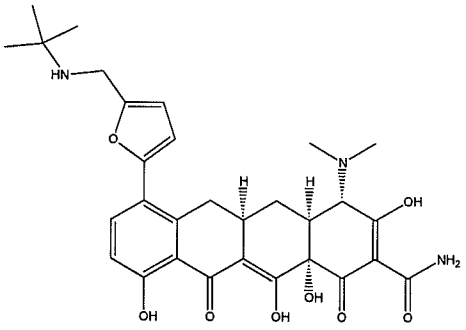


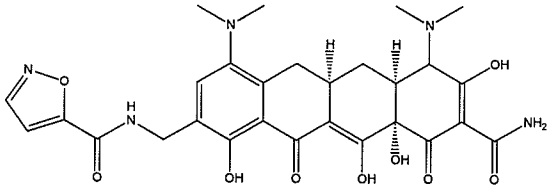


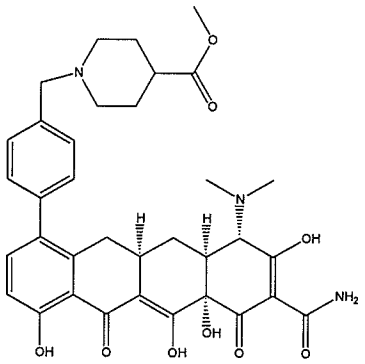


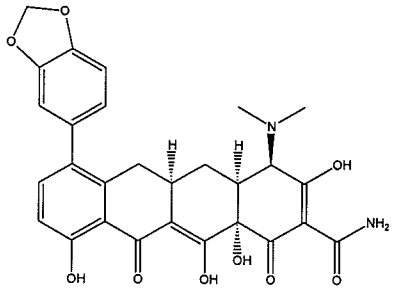


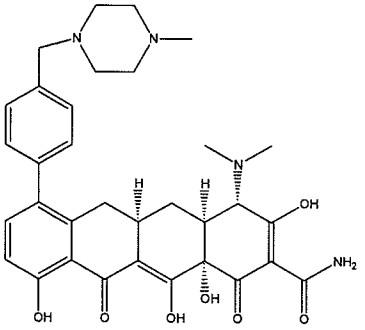


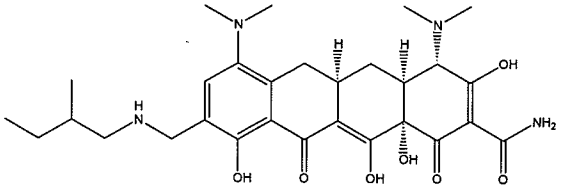


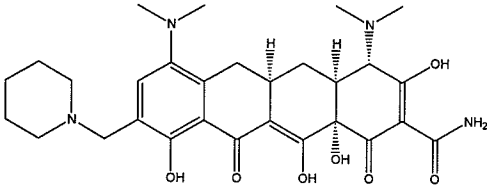


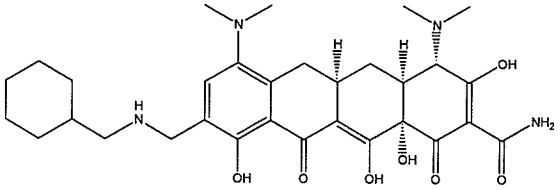


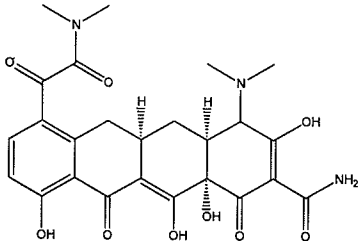


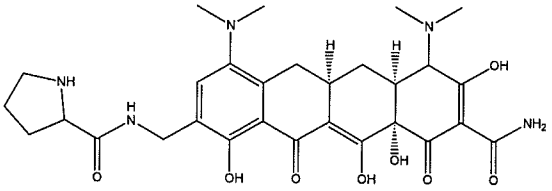


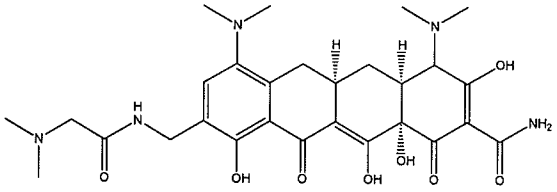


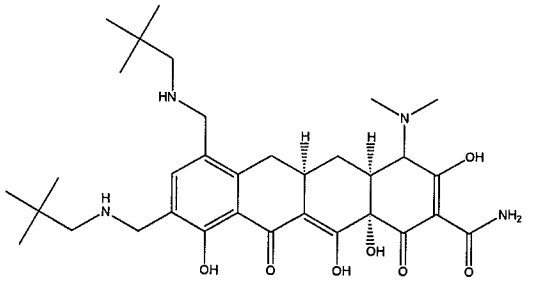


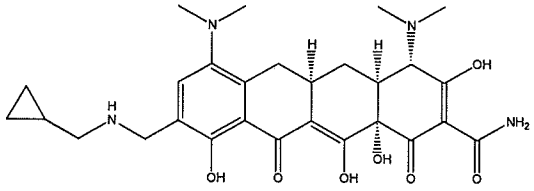


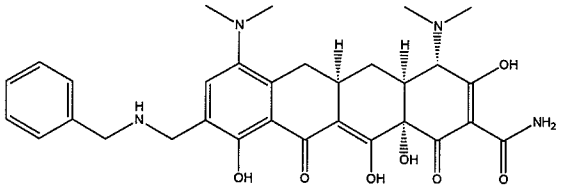


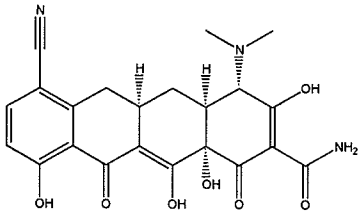


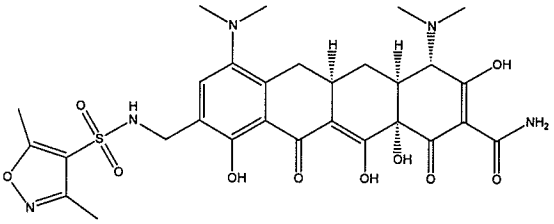


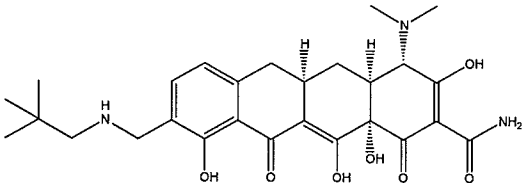


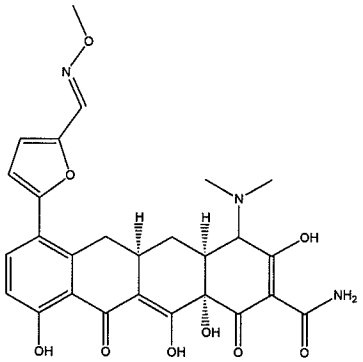


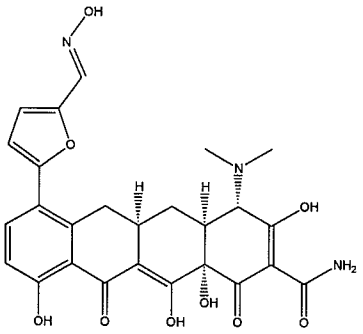


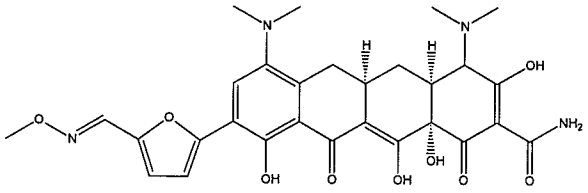


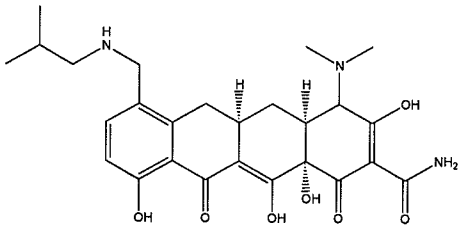


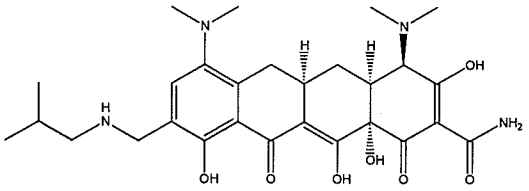


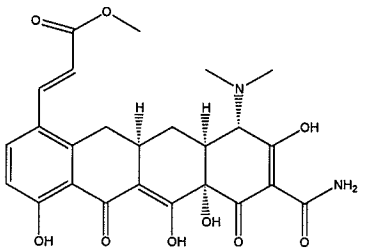


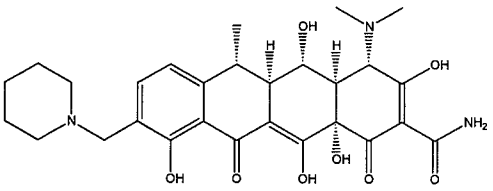


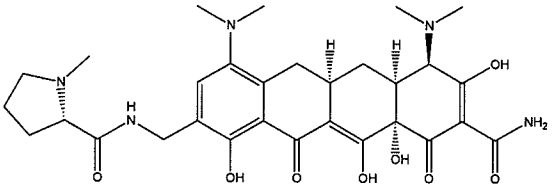


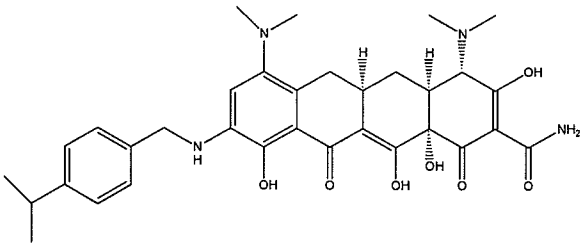


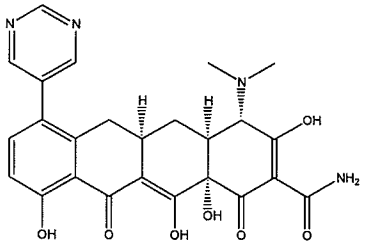


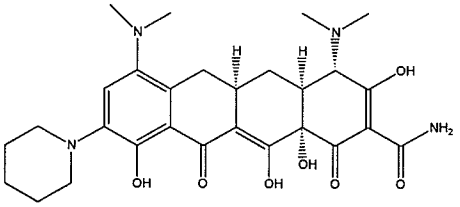


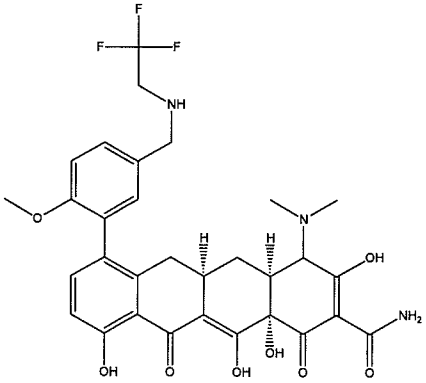


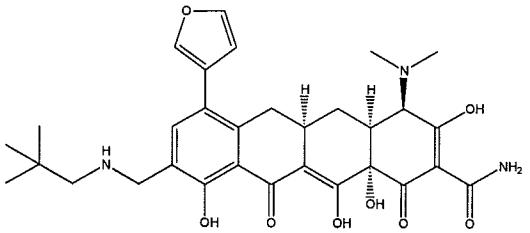


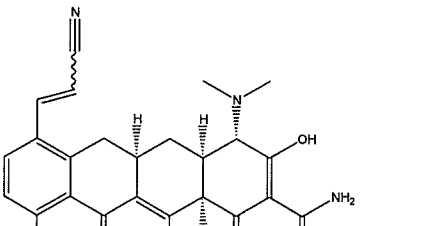


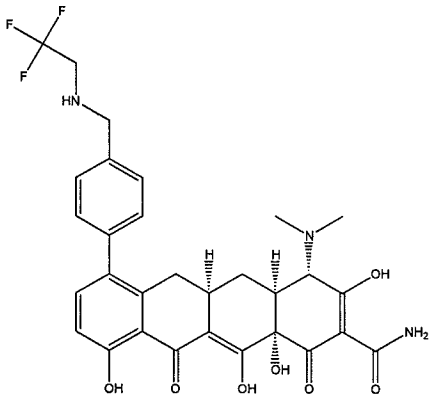


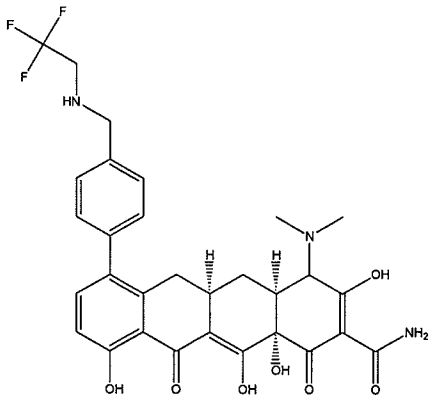


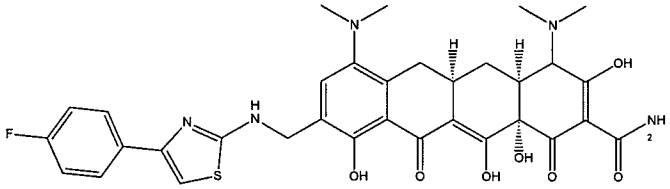


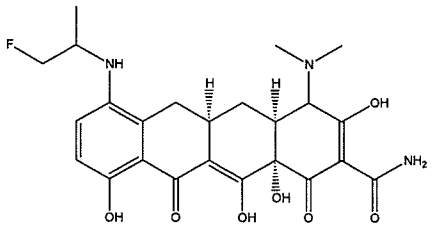


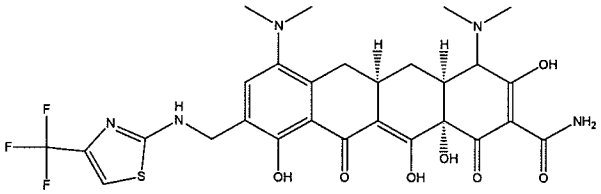


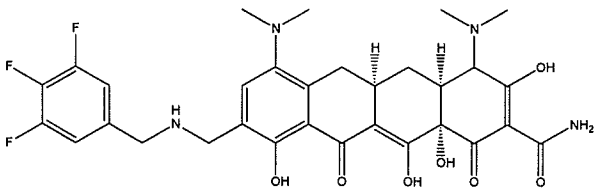


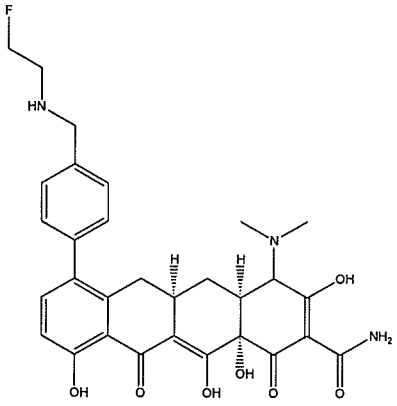


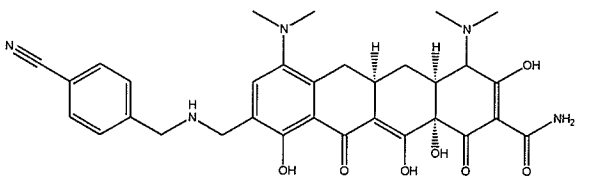


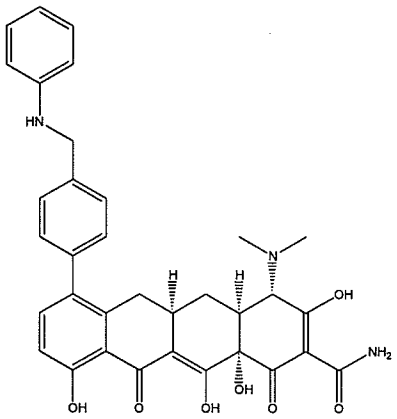


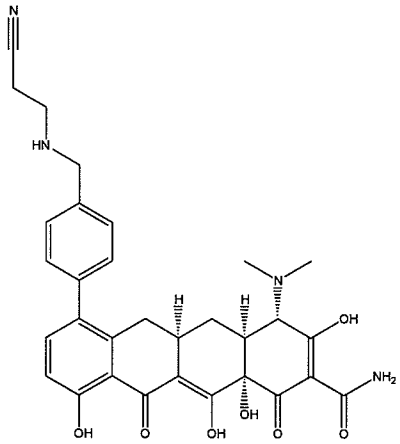


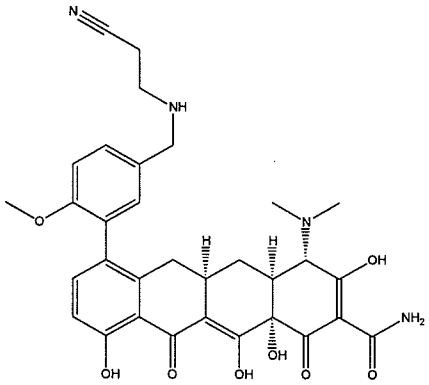


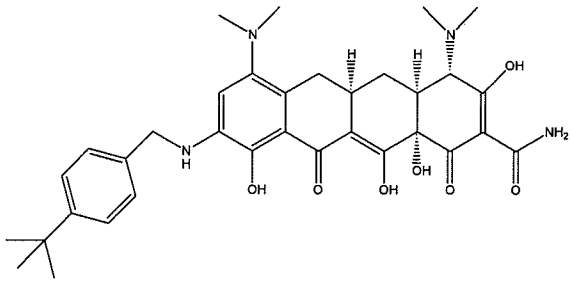


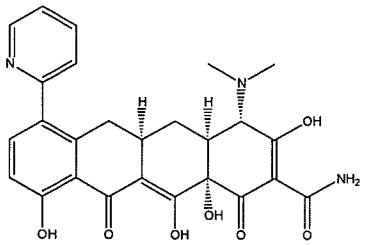


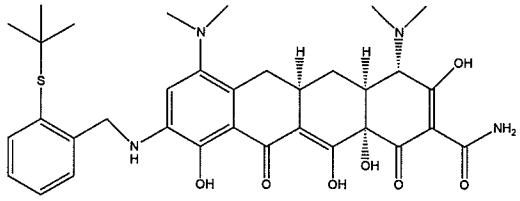


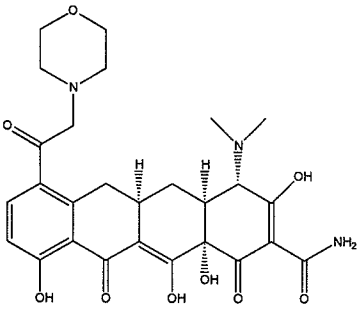


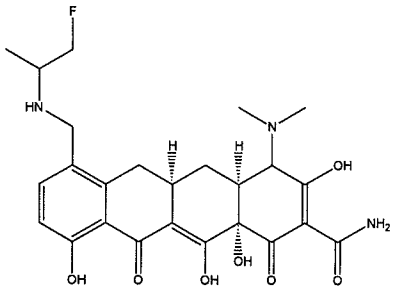


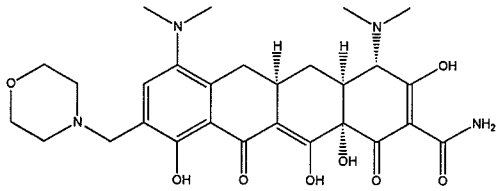


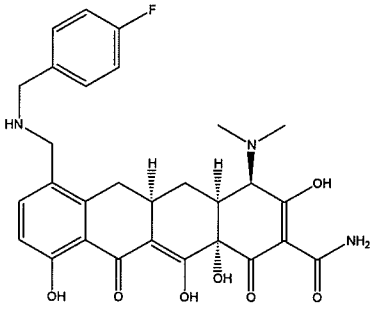


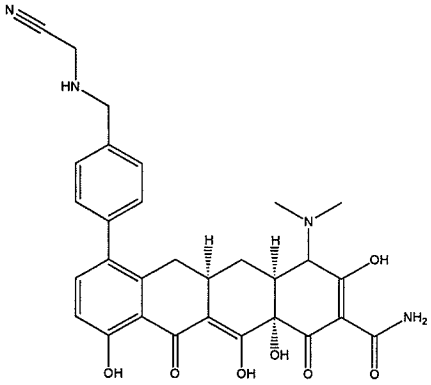


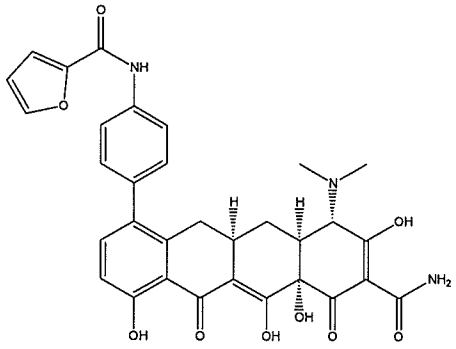


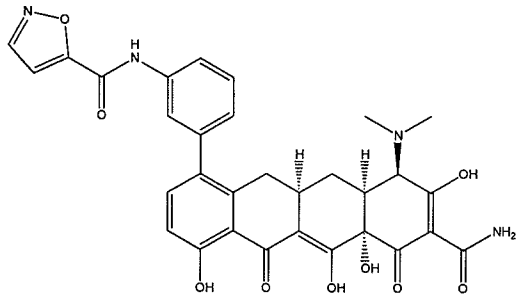


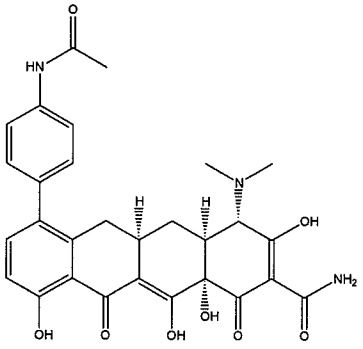


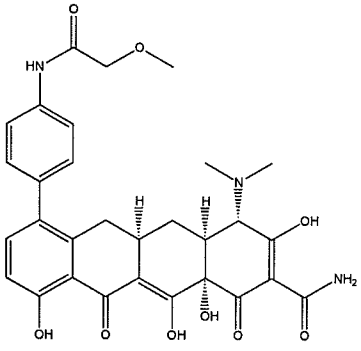


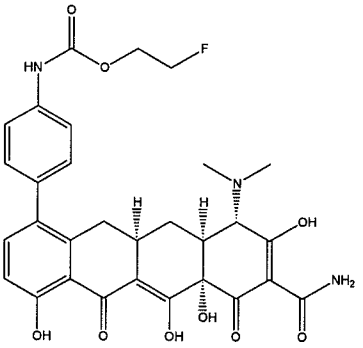


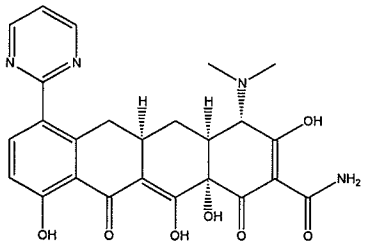


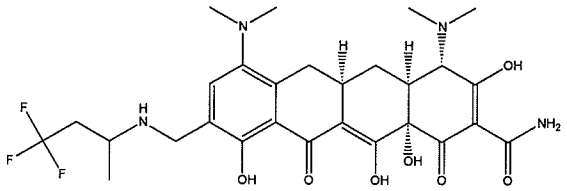


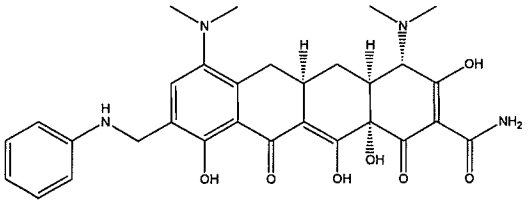


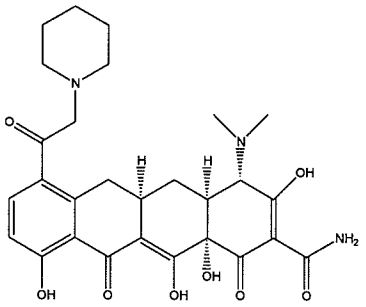


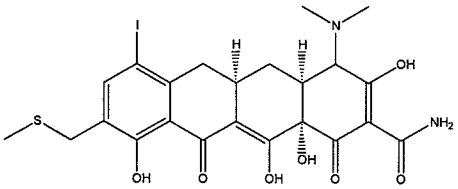


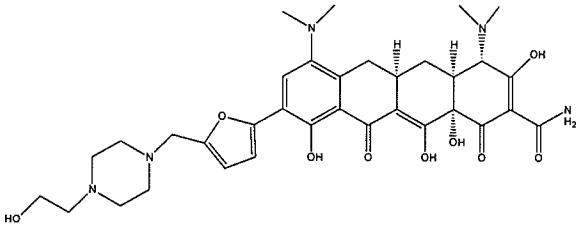


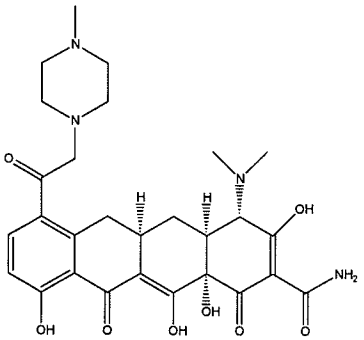


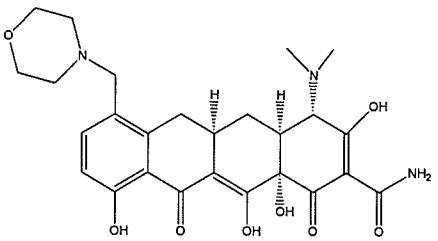


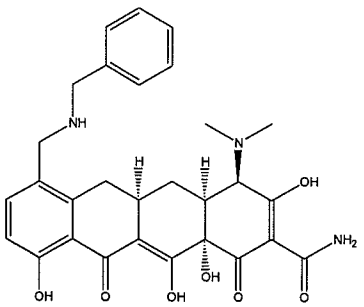


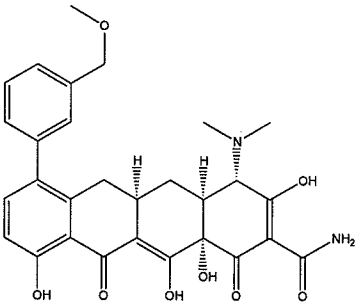


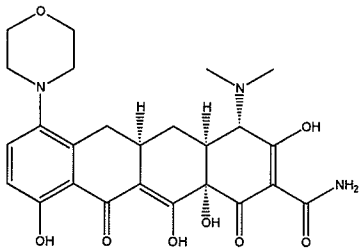


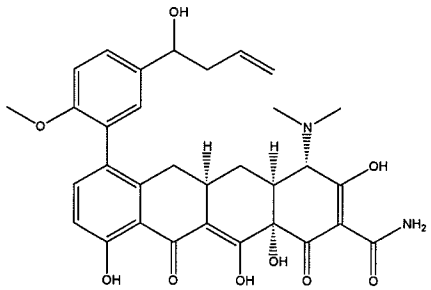


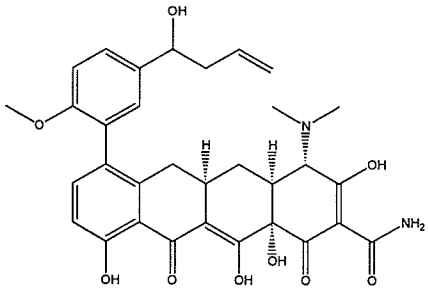


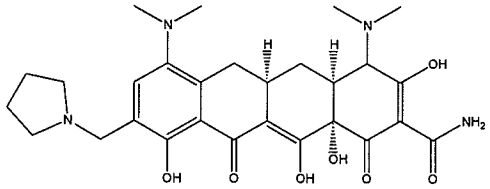


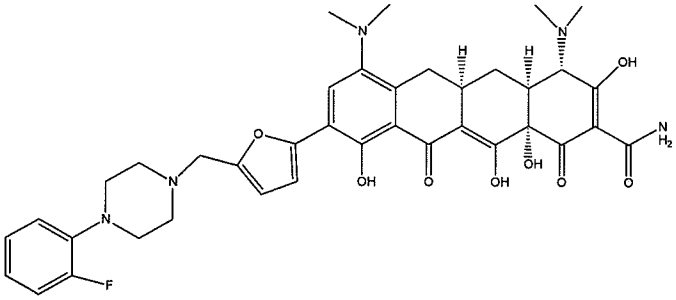


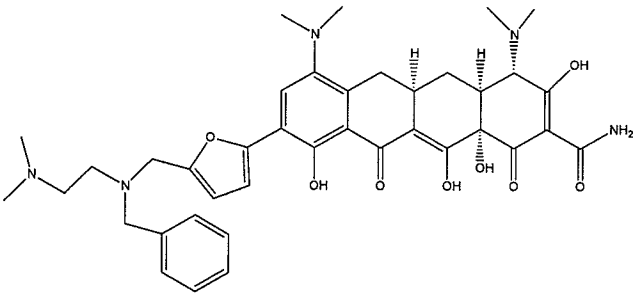


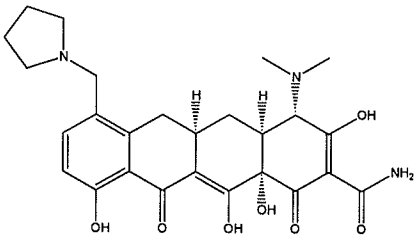


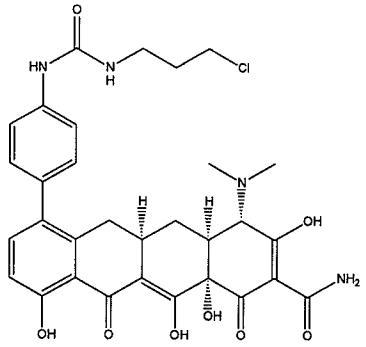


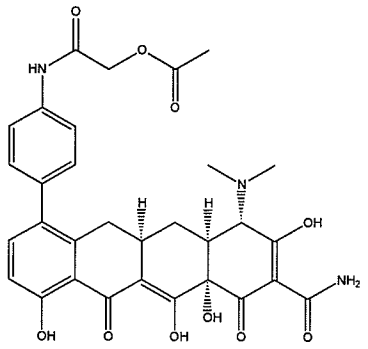


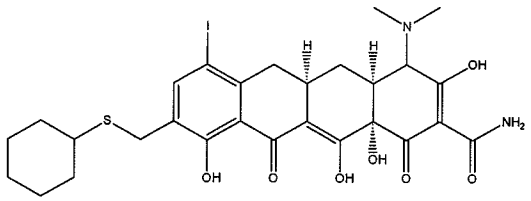


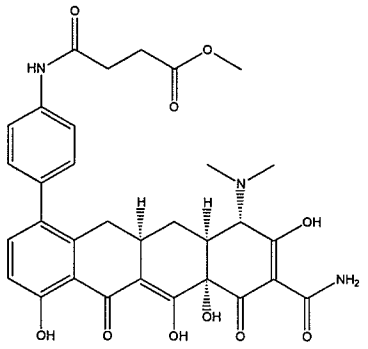


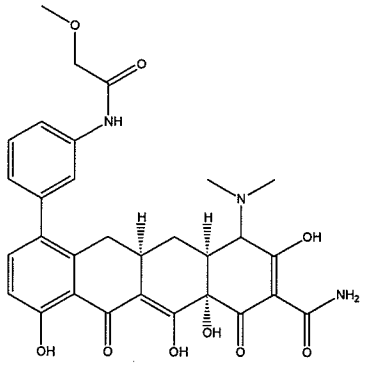


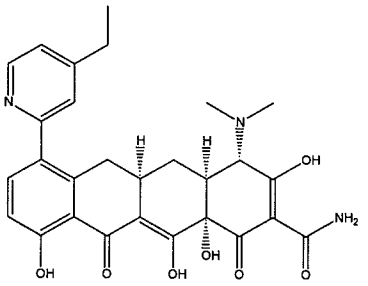


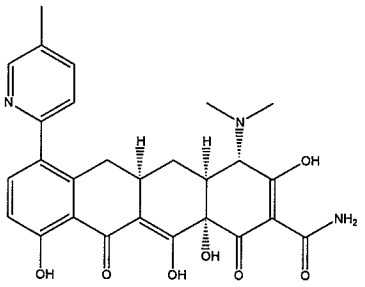


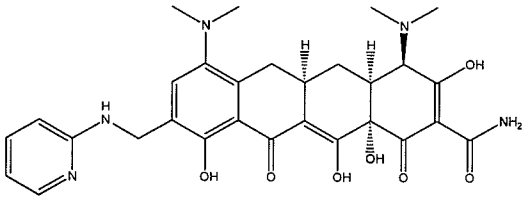


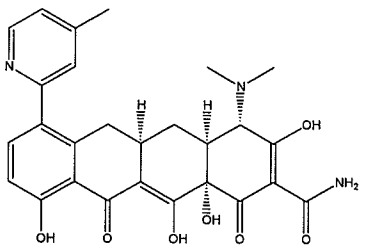


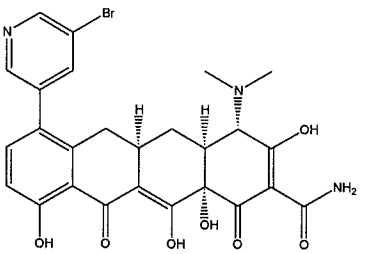


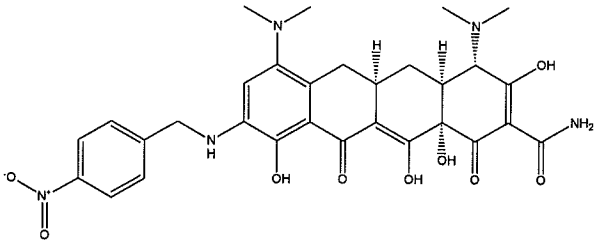


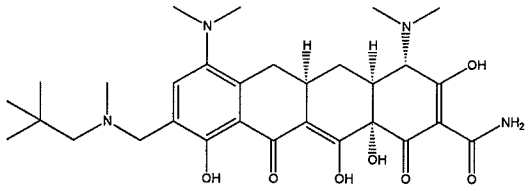


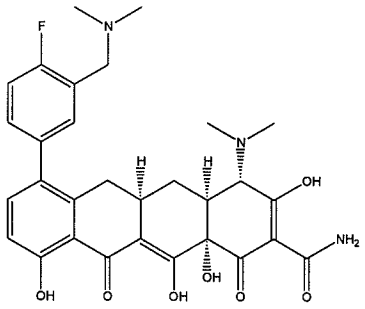


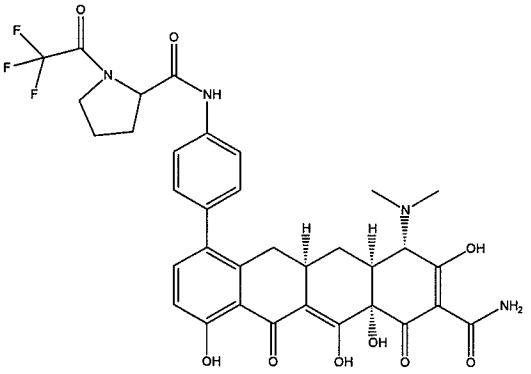


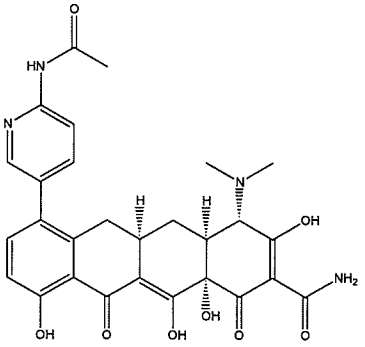


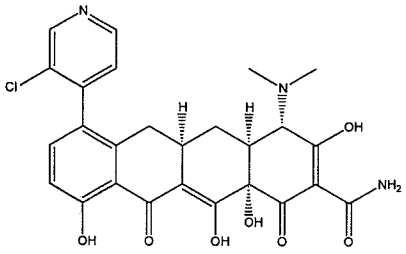


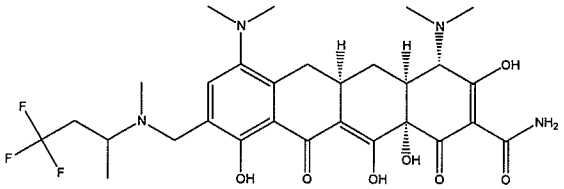


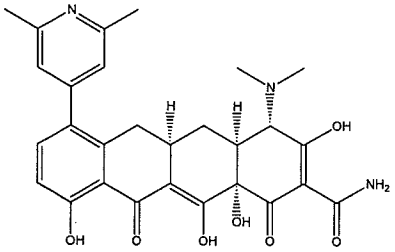


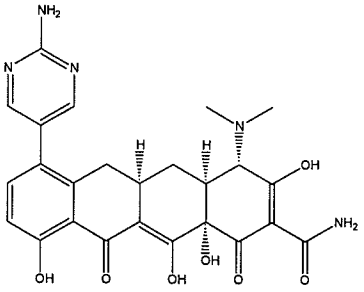


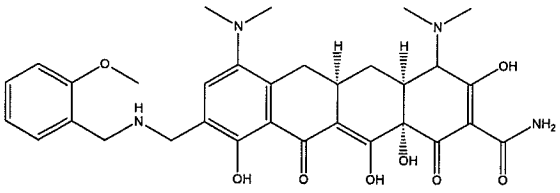


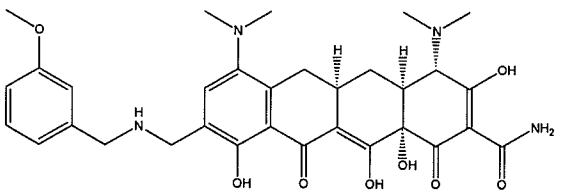


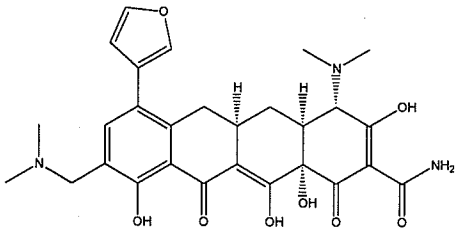


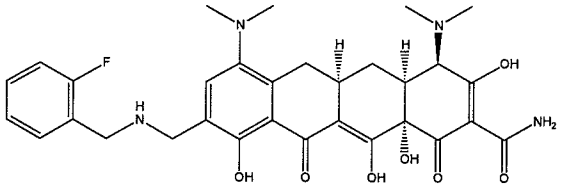


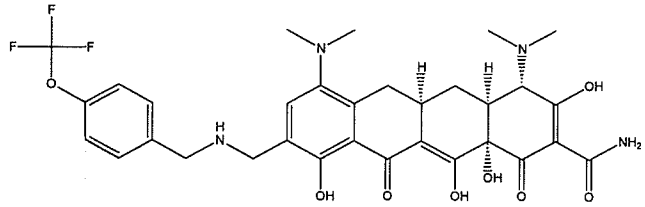


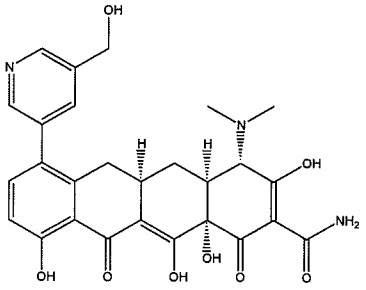


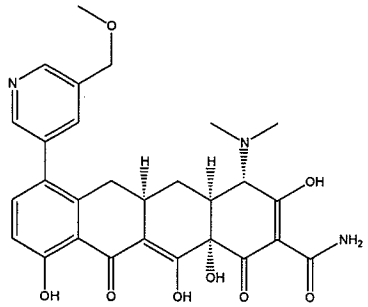


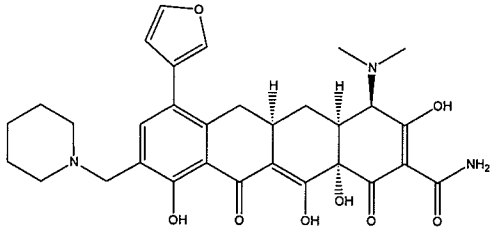


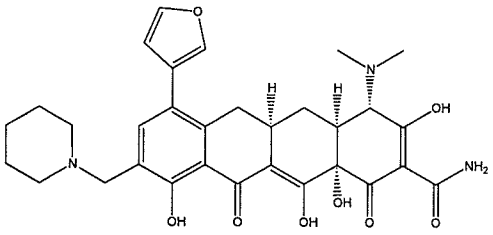


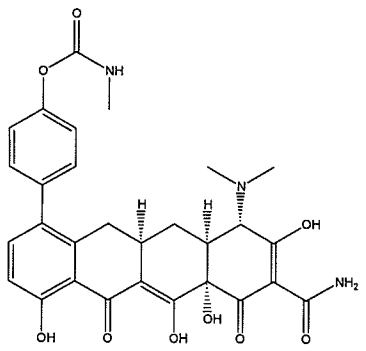


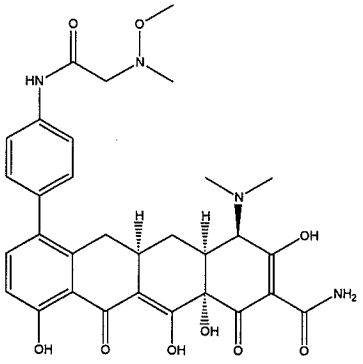


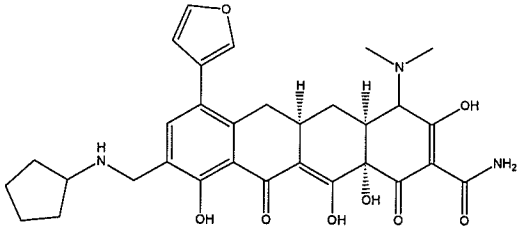


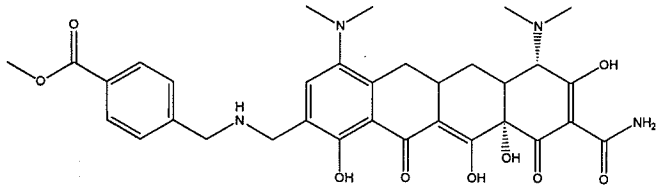


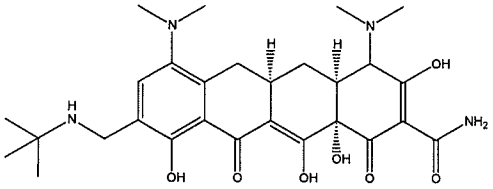


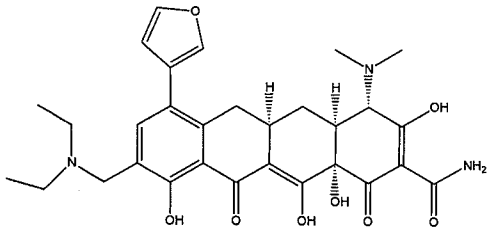


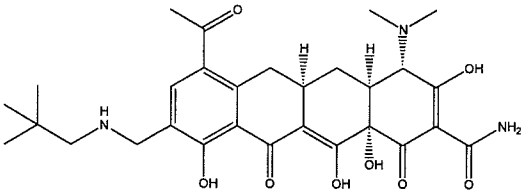


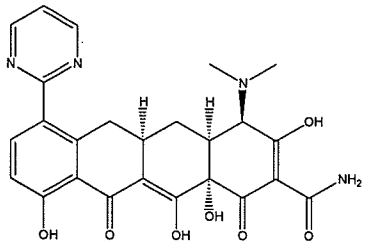


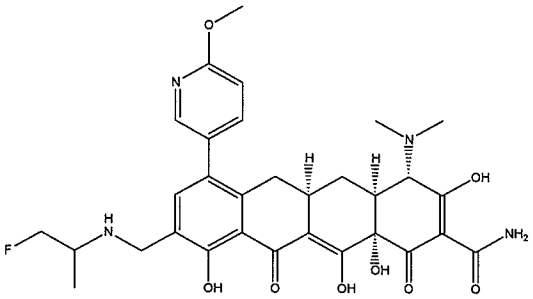


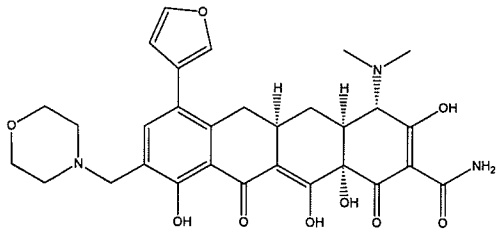


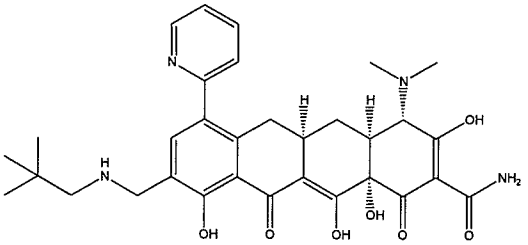


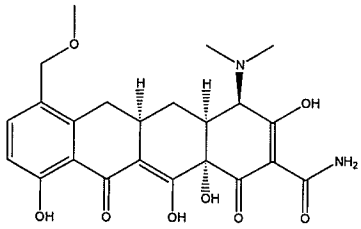


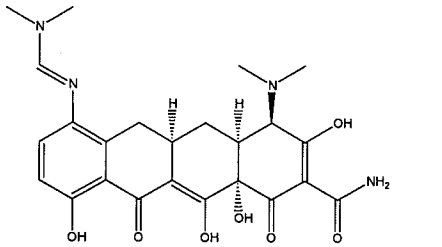


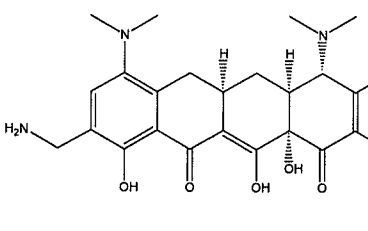


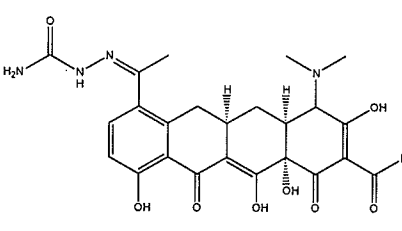


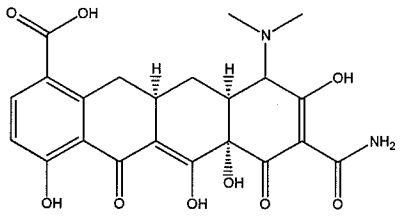


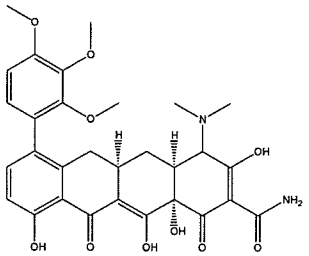


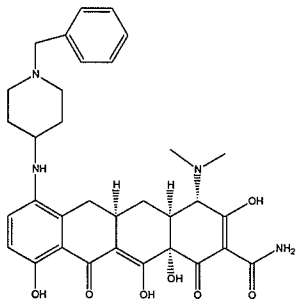


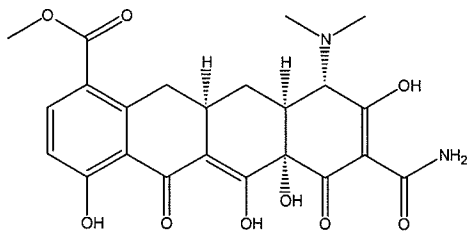


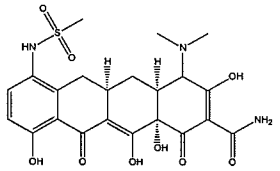


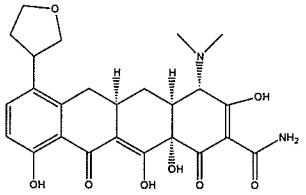


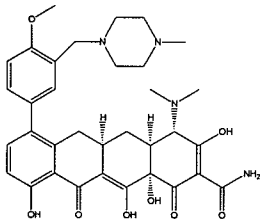


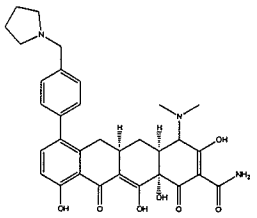


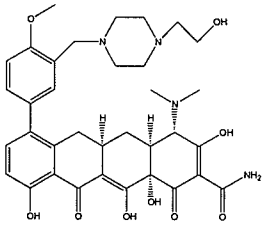


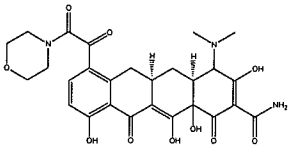


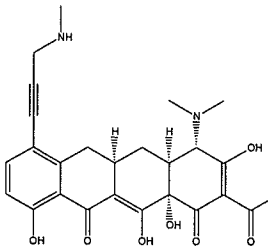


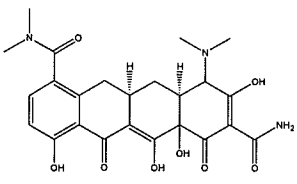


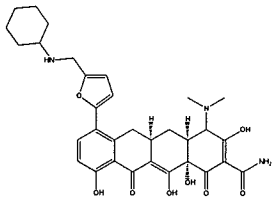


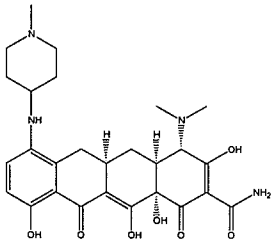


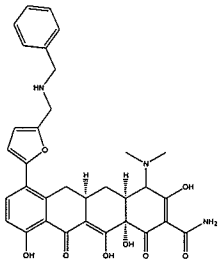


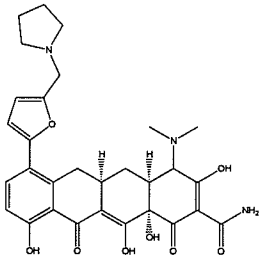


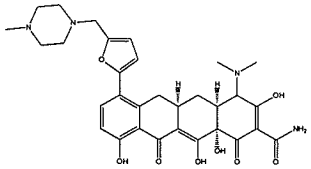


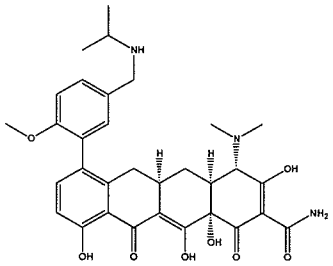


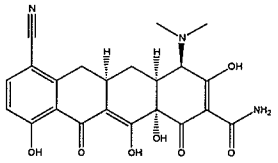


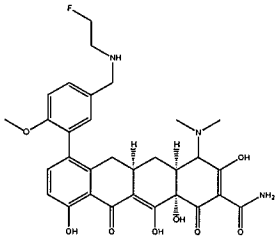


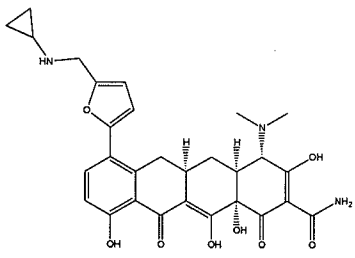


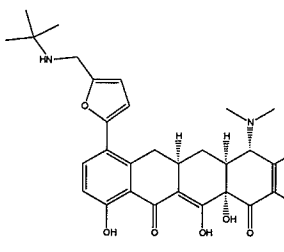


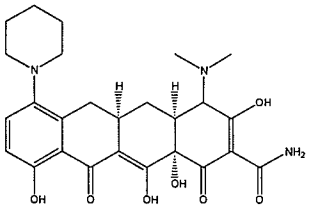


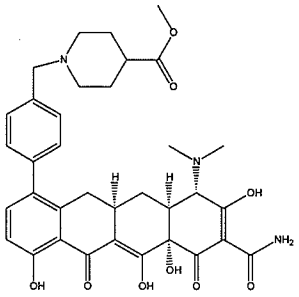


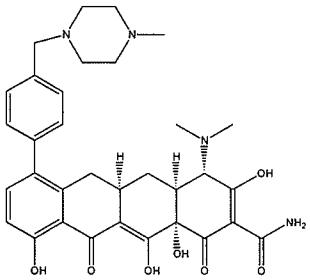


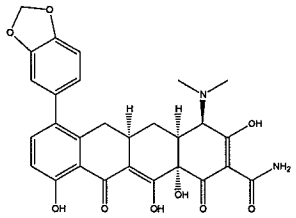


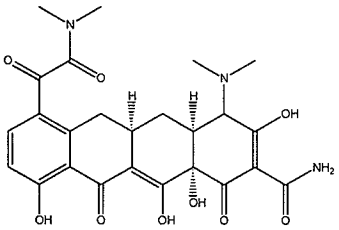


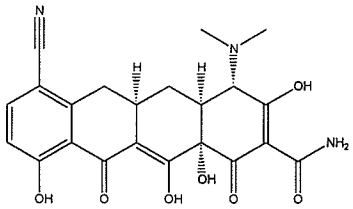


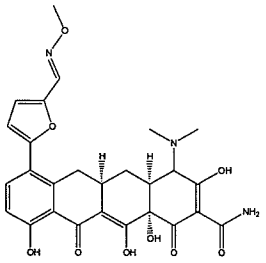


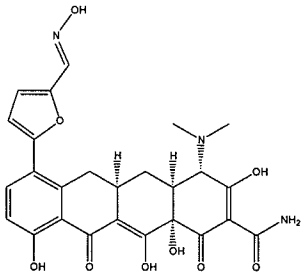


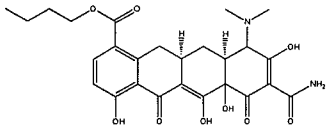


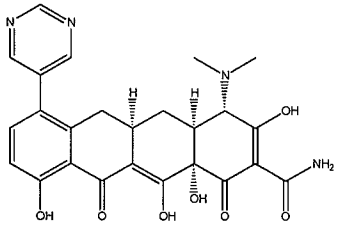


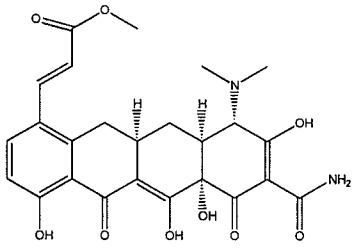


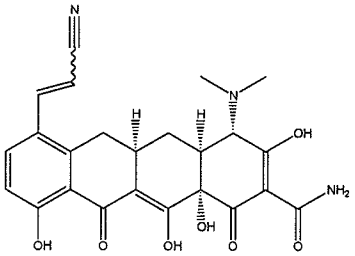


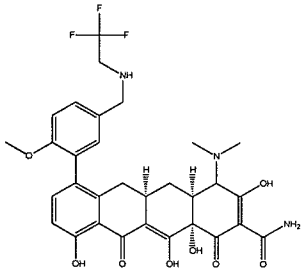


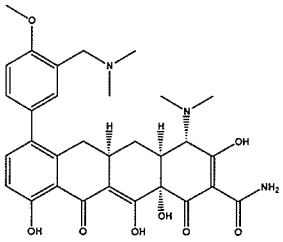


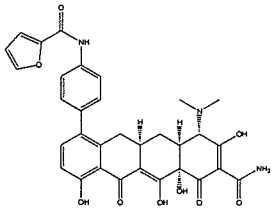


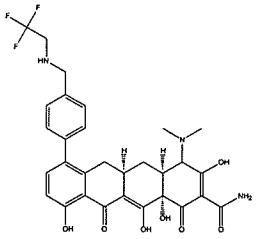


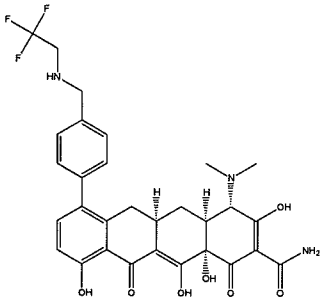


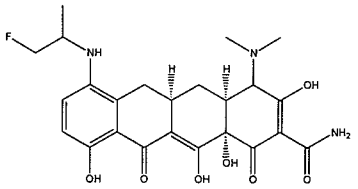


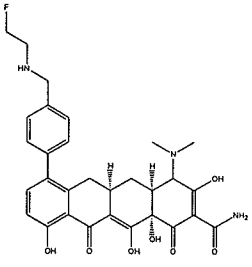


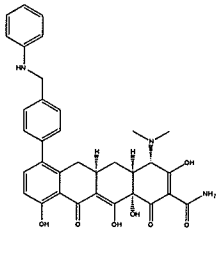


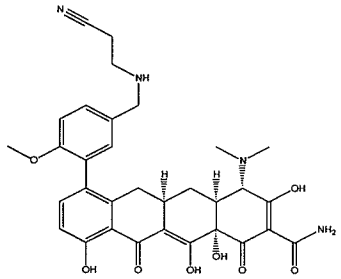


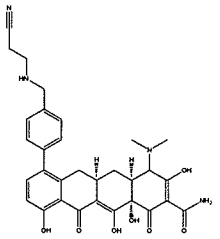


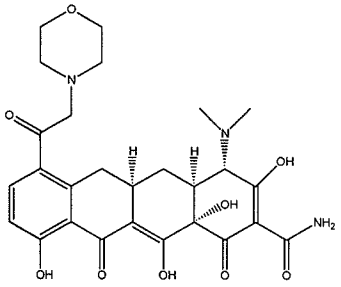


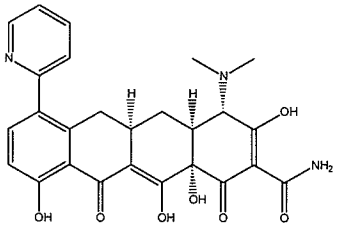


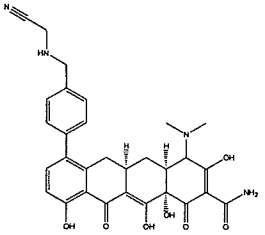


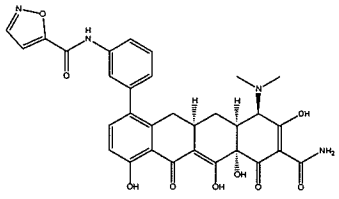


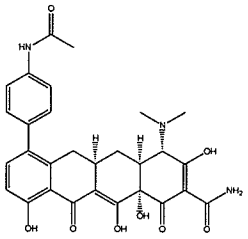


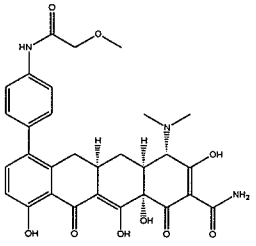


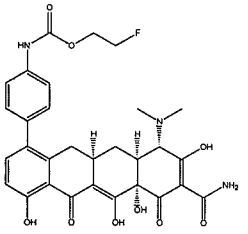


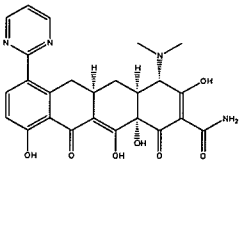


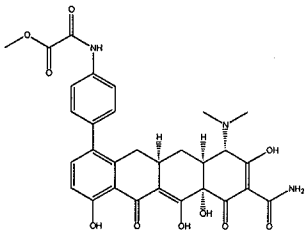


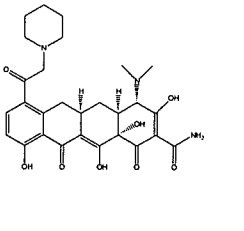


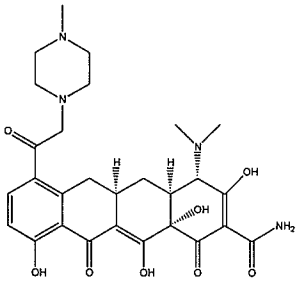


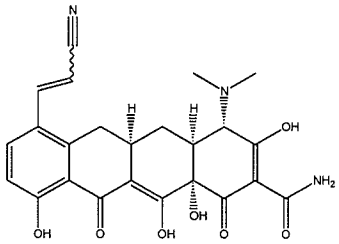


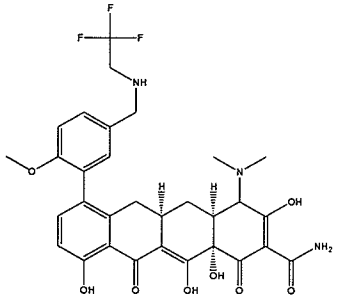


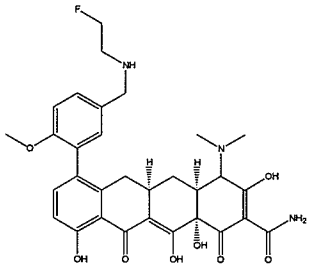


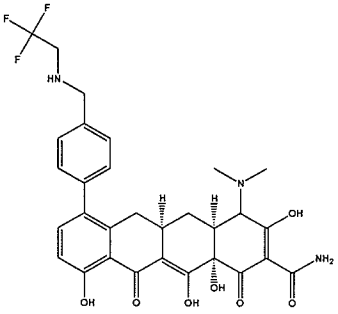


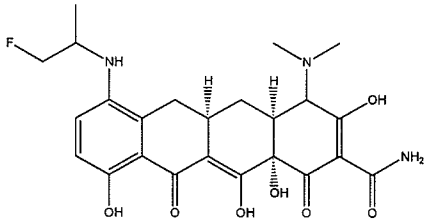


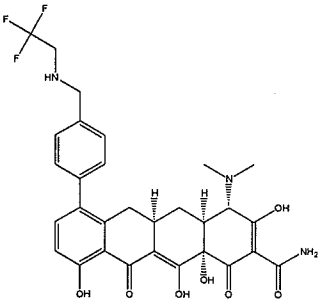


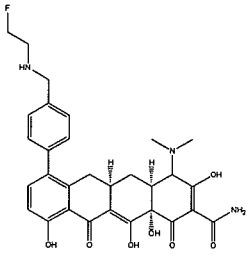


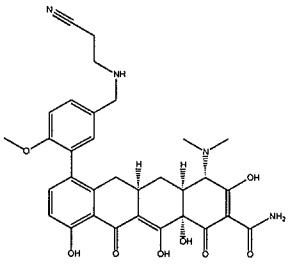


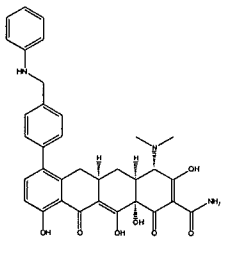


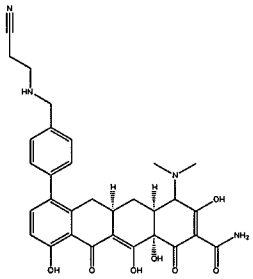


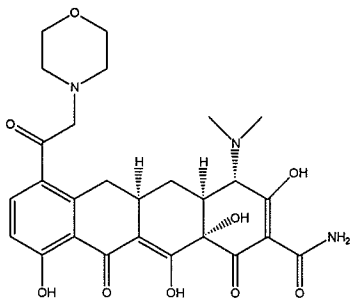


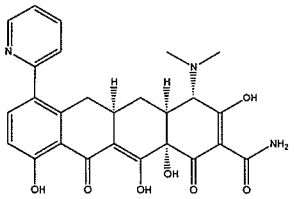


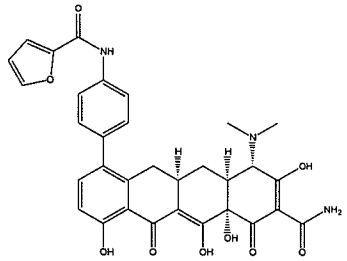


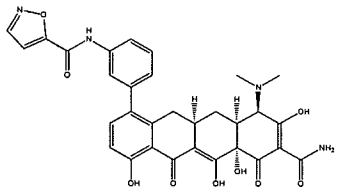


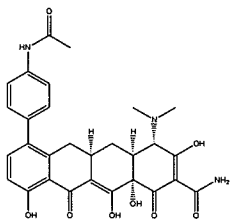


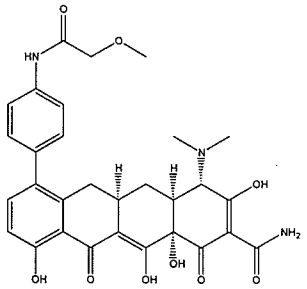


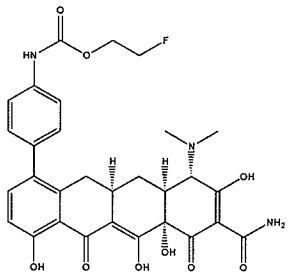


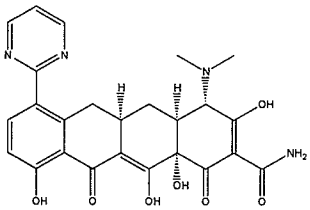


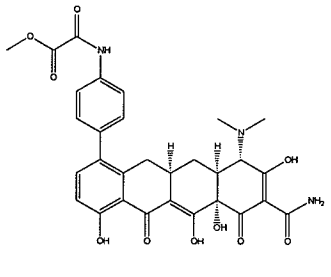


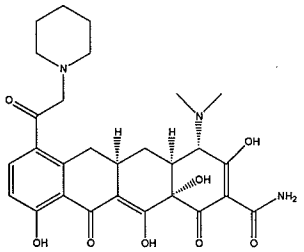


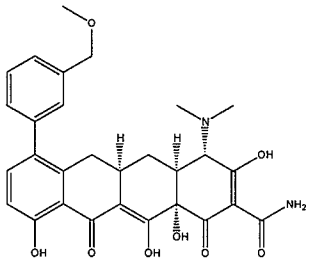


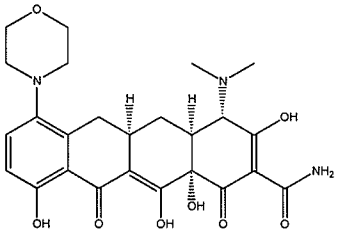


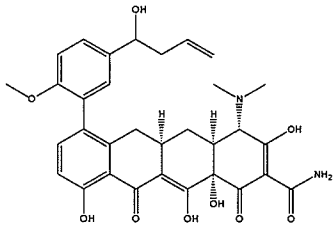


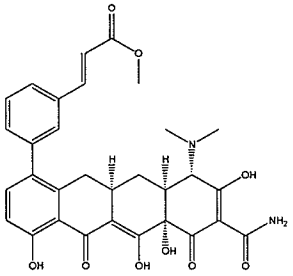


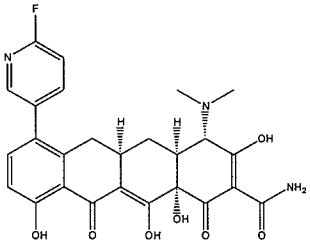


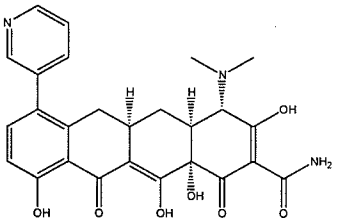


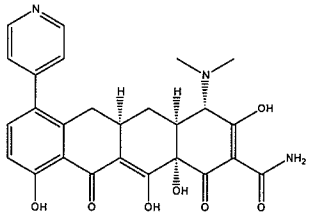


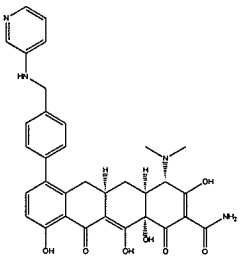


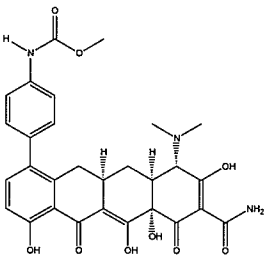


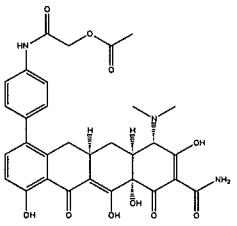


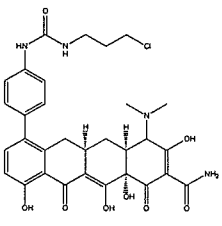


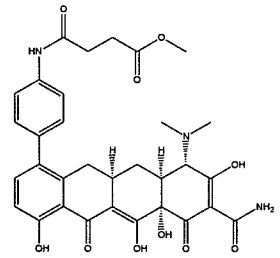


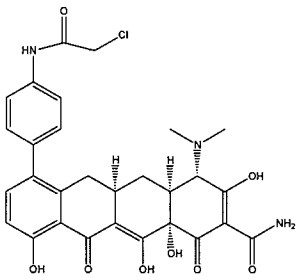


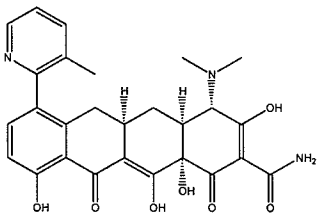


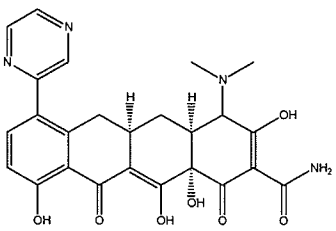


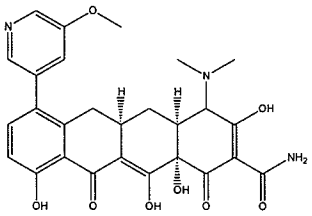


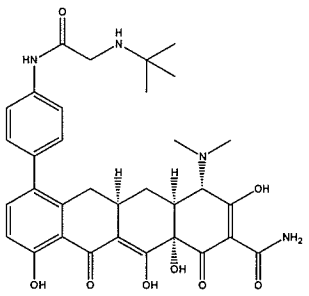


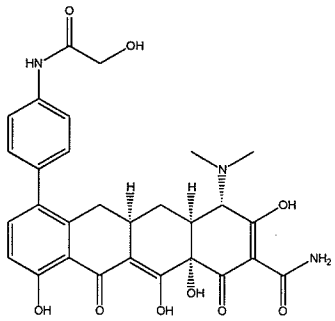


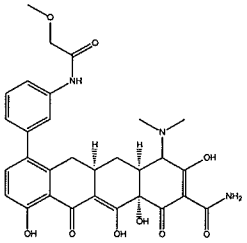


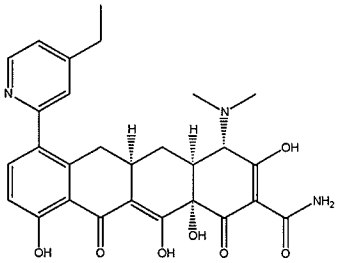


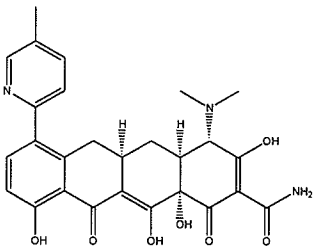


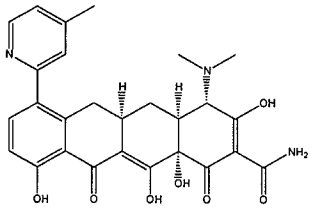


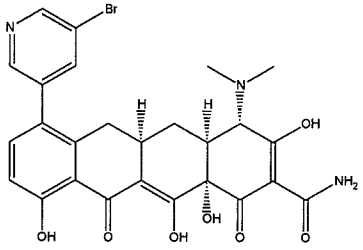


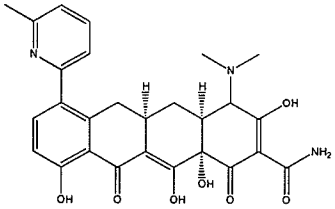


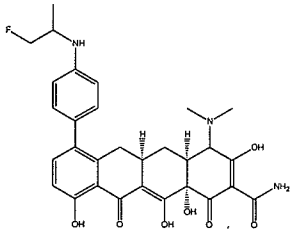


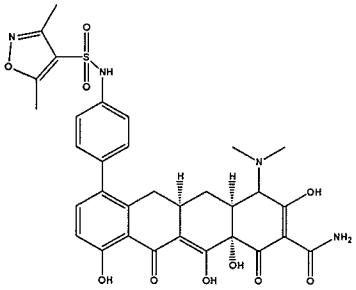


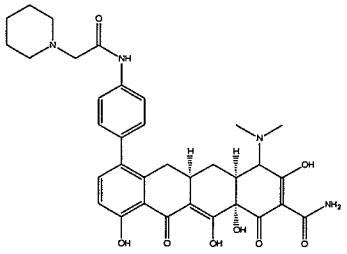


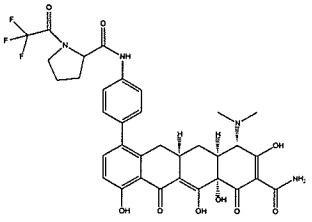


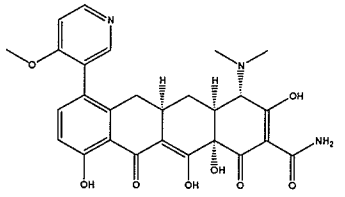


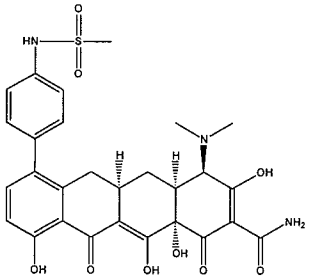












N
OH
NH2
OH
O
OH
OH
O
O

Br
N
OH
NH2
OH
O
OH
OH
O
O

N
OH
NH2
OH
O
OH
OH
O
O

F
NH
OH
NH2
OH
O
OH
OH
O
O

N
O
O
S
O
NH
OH
NH2
OH
O
OH
OH
O
O

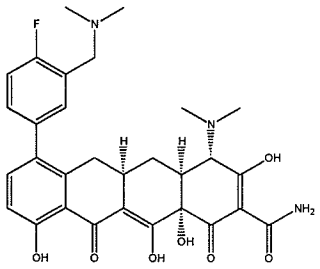
O
N
NH
OH
NH2
OH
O
OH
OH
O
O

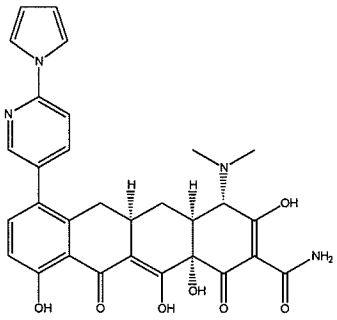
F
F
F
O
N
O
NH
OH
NH2
OH
O
OH
OH
O
O

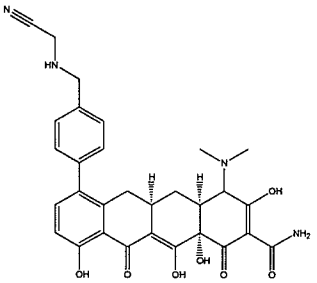
N
O
OH
NH2
OH
O
OH
OH
O
O

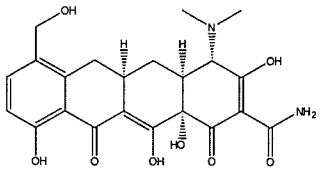
O
HN
S
O
OH
NH2
OH
O
OH
OH
O
O

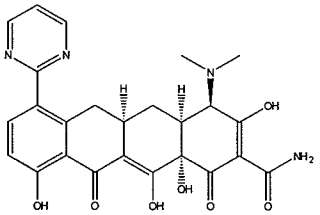
O
HN
N
O
O
OH
NH2
OH
O
OH
OH
O
O

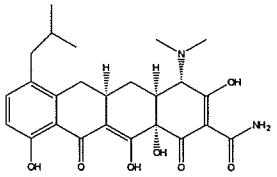


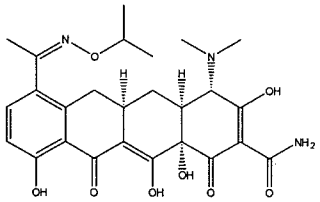


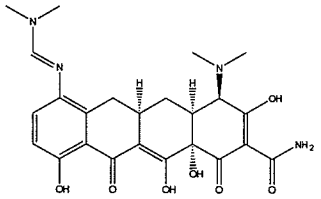


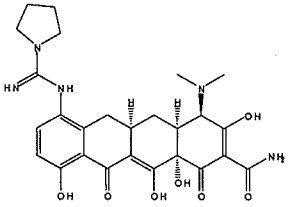


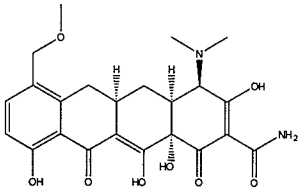


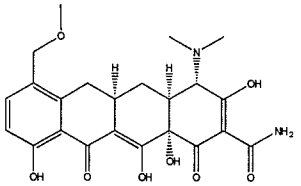


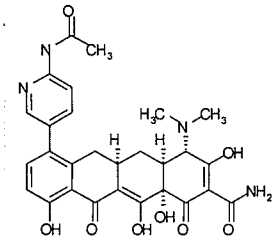


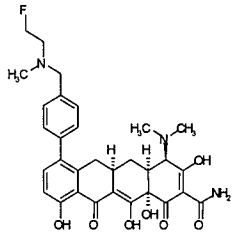


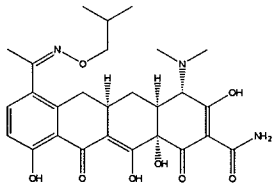


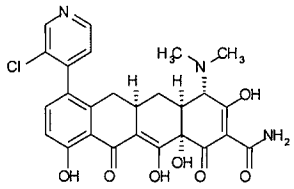


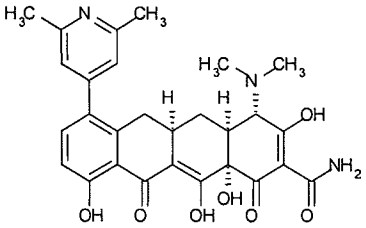


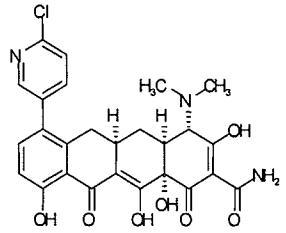


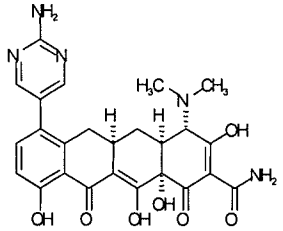


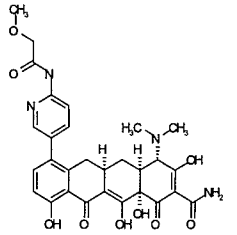


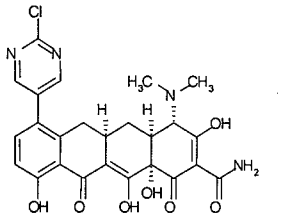


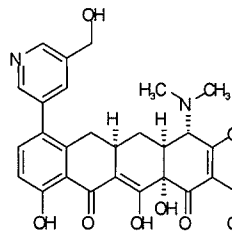


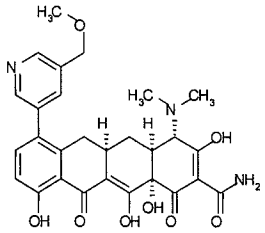


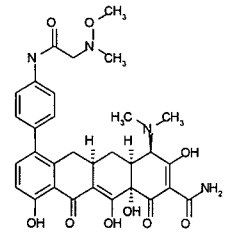


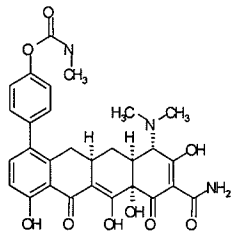


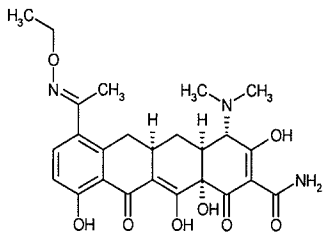


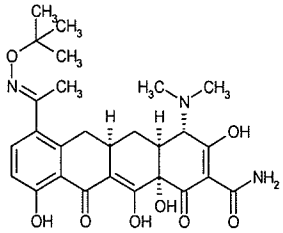


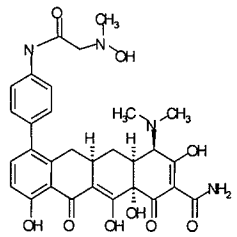


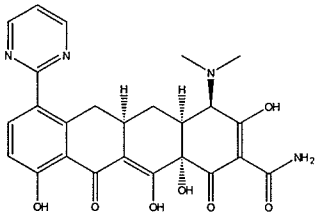


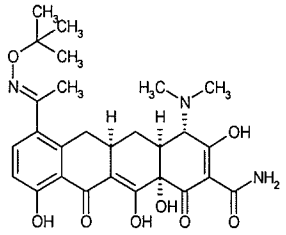


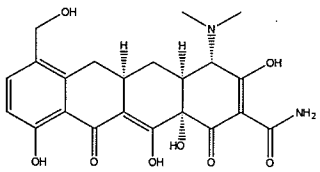


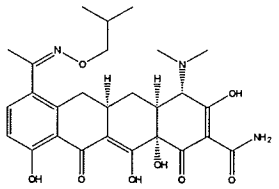


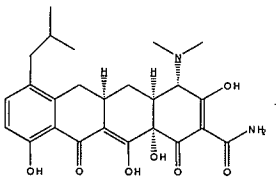


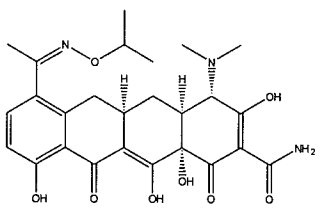


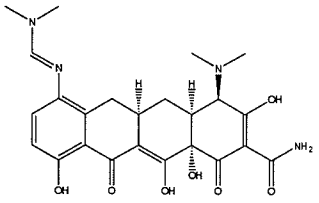


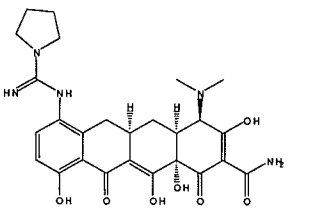


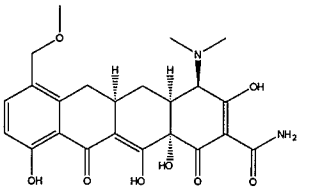


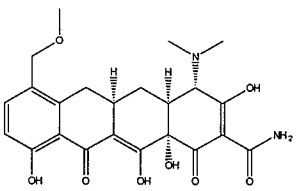


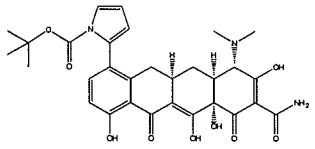


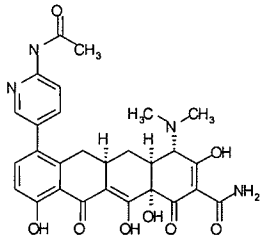


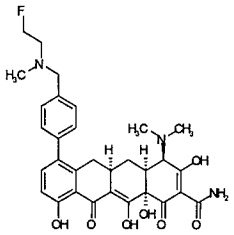


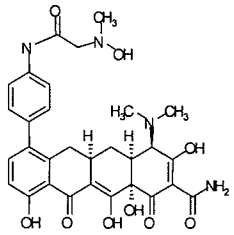


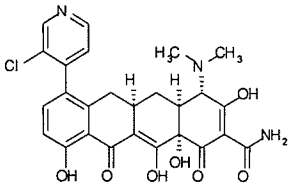


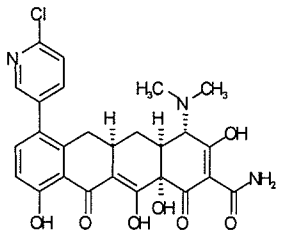


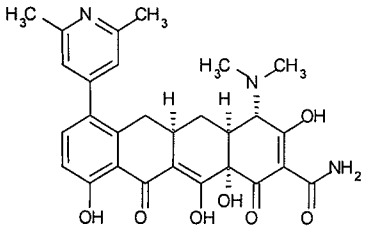


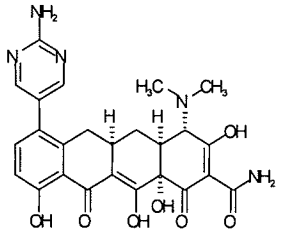


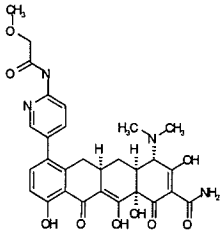


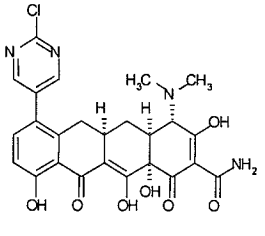


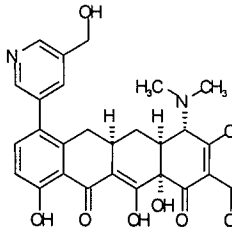


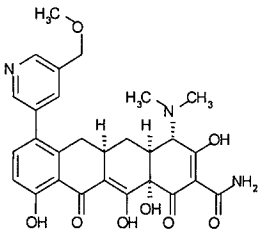


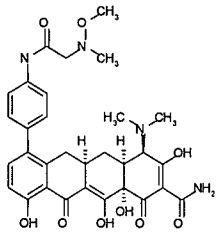


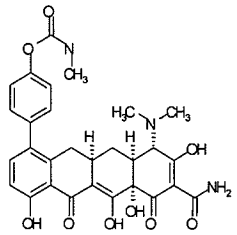


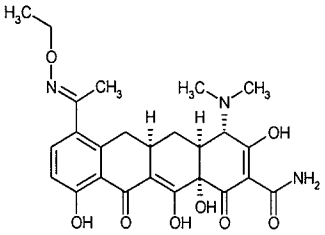


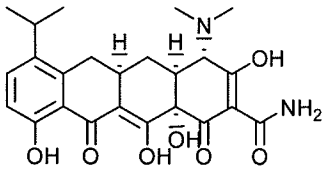


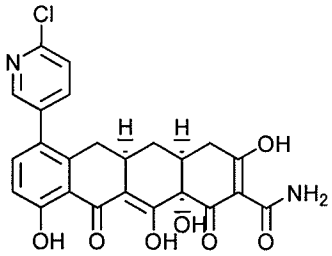


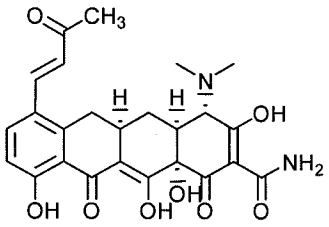


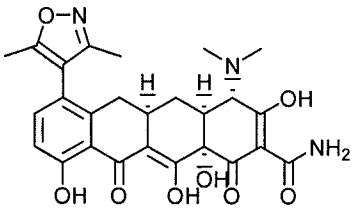


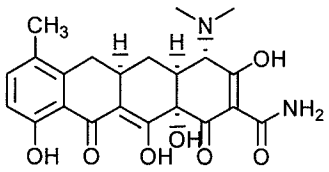


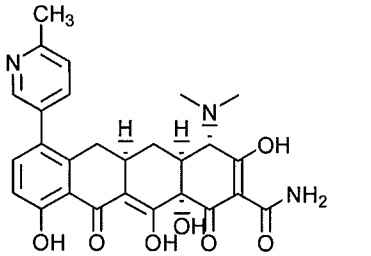


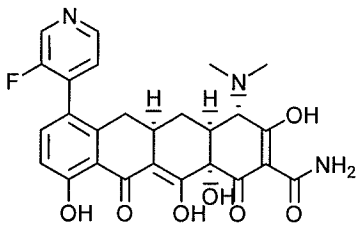


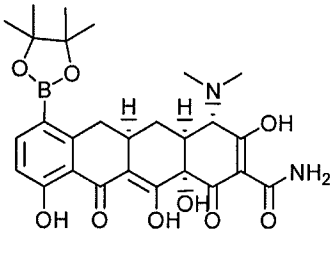


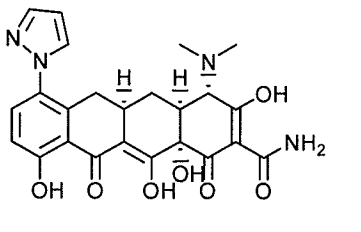


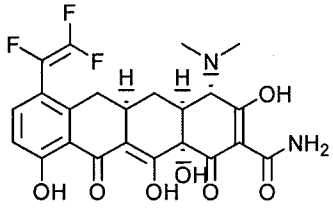


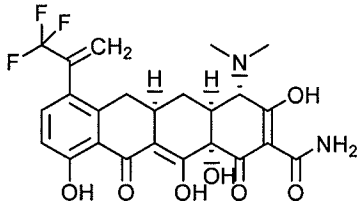


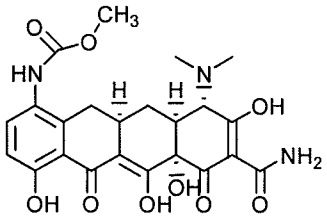


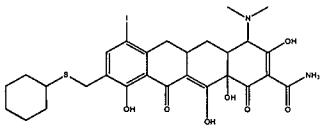


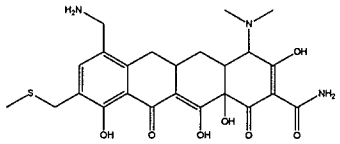


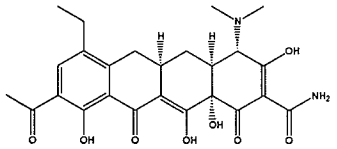


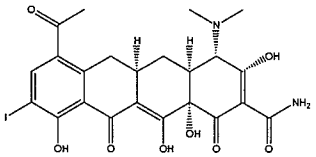


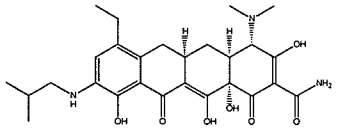


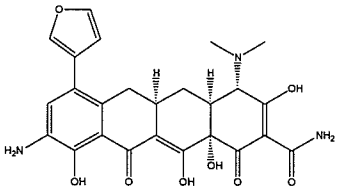


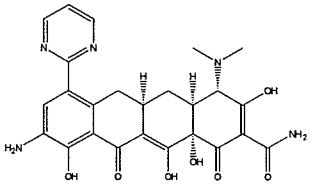


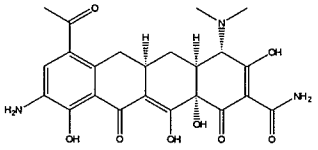


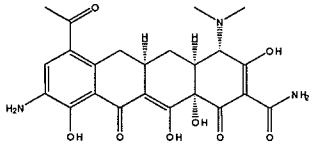


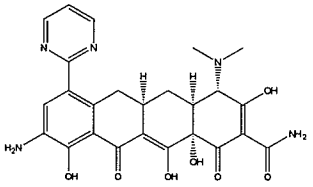


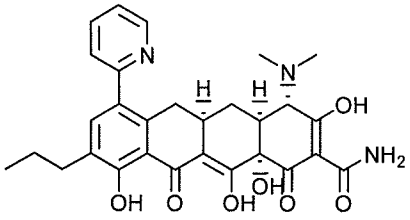


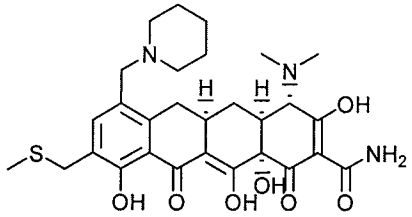


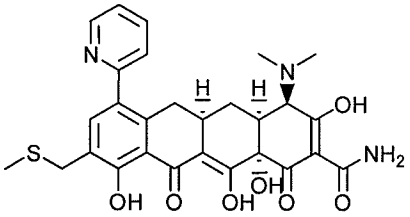


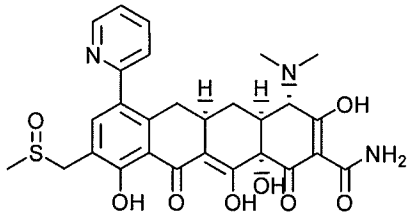


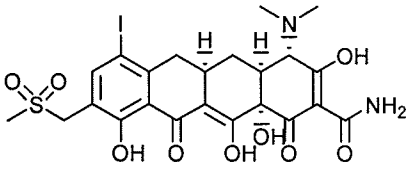


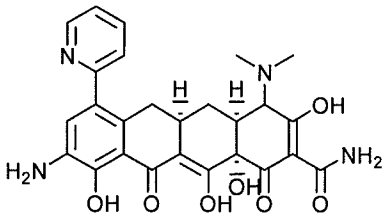


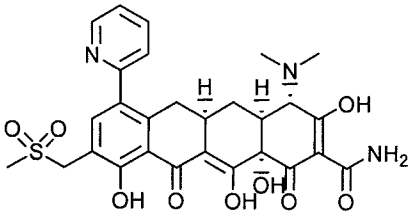


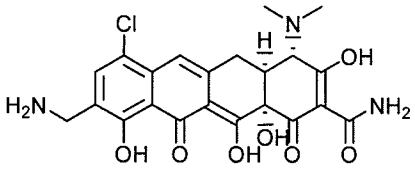


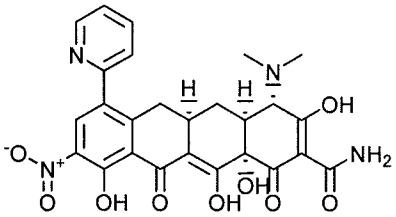


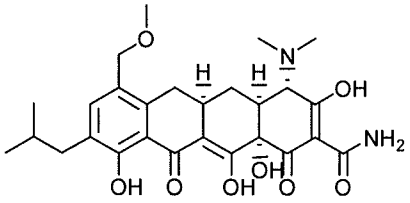


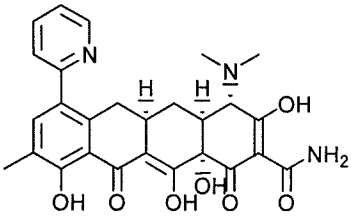


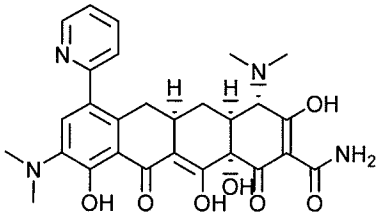


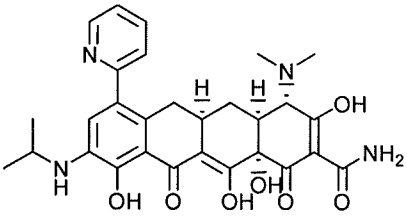


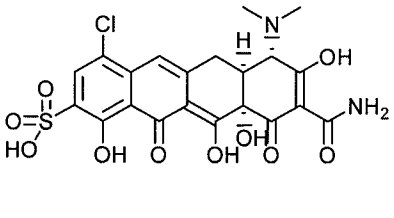


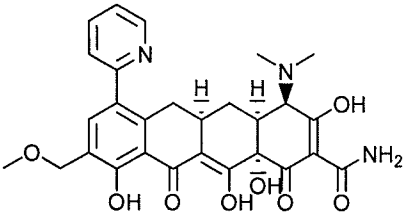


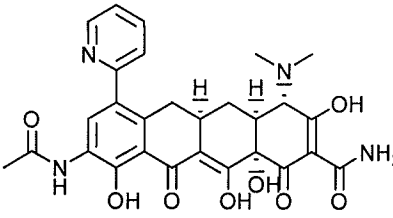


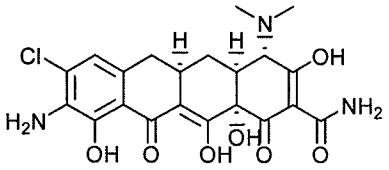


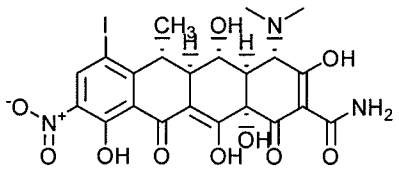


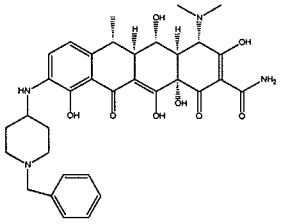


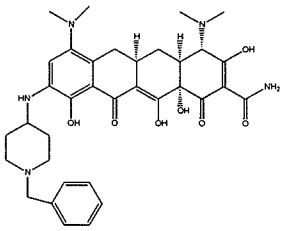


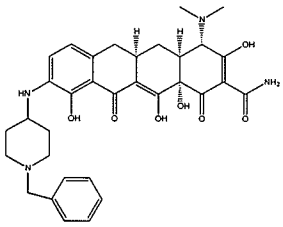


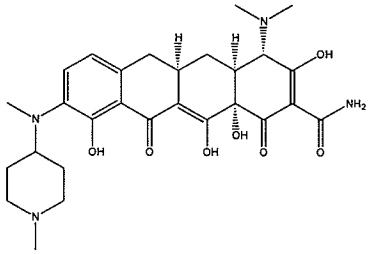


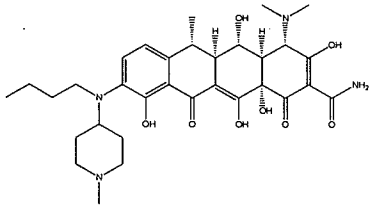


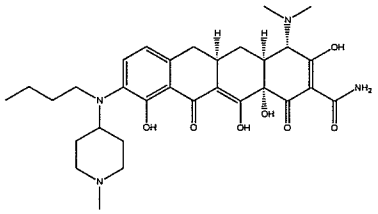


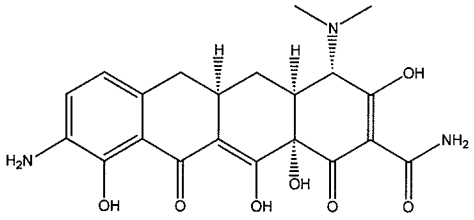


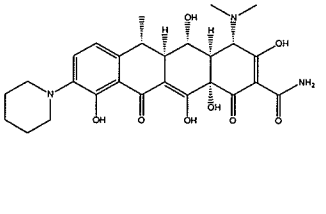


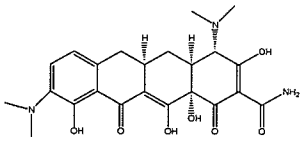


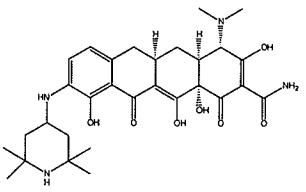


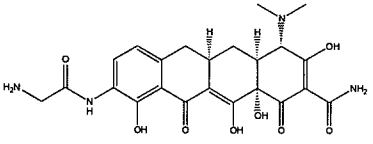


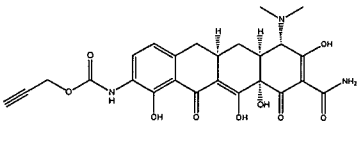


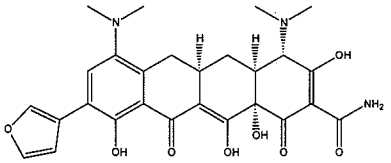


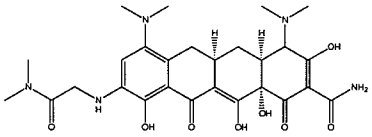


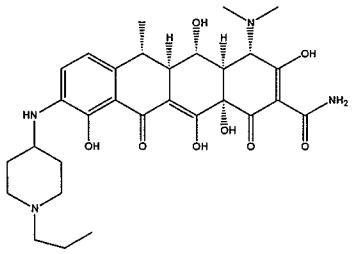


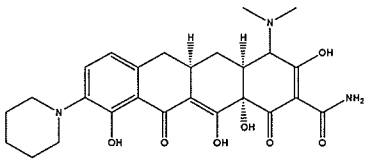


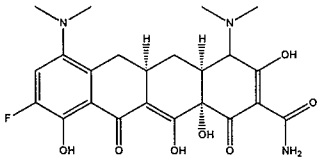


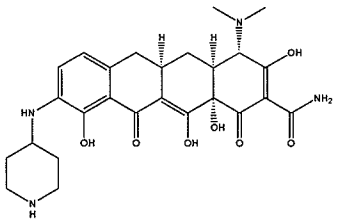


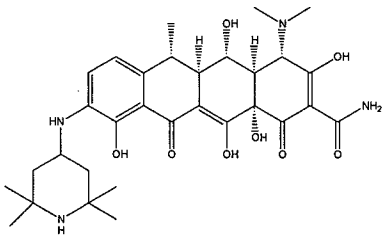


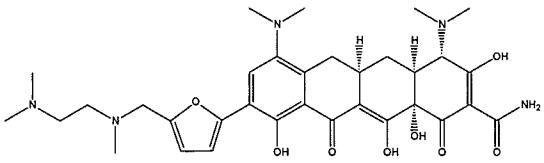


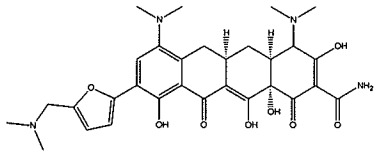


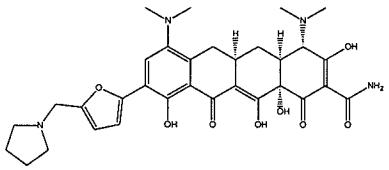


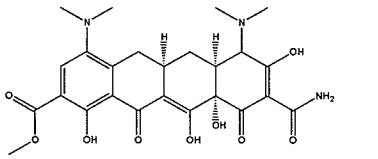


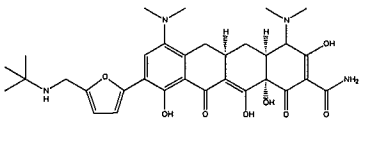


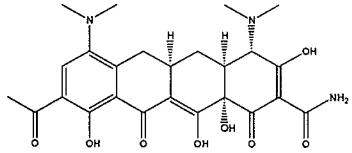


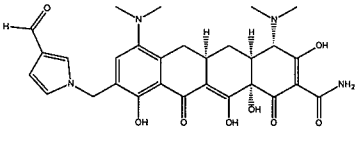


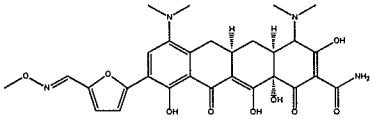


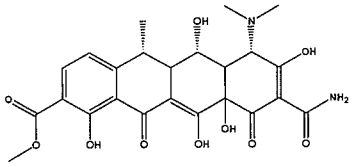


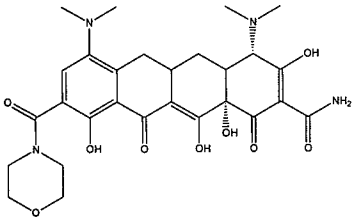


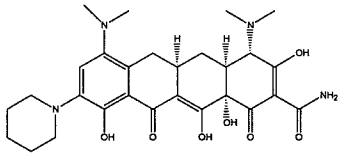


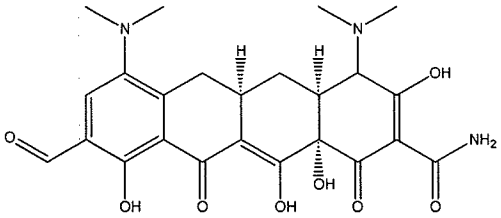


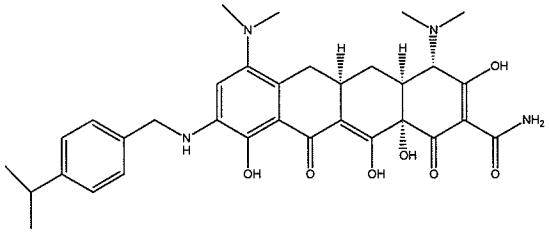


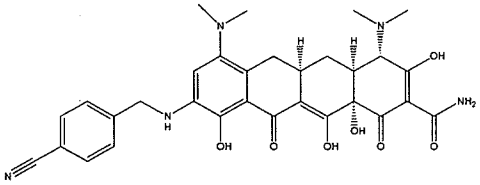


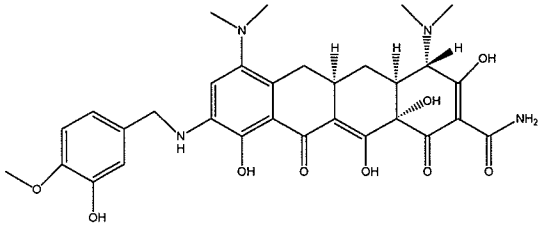


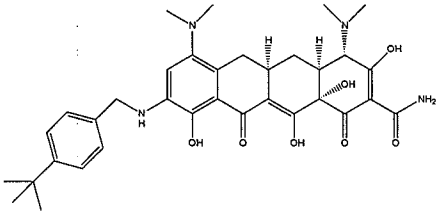


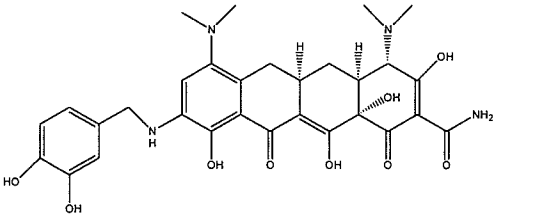


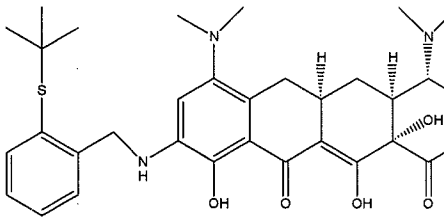


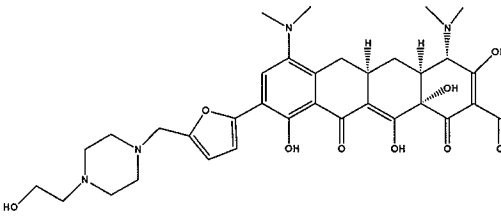


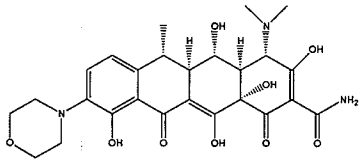


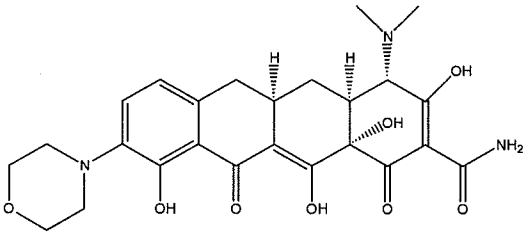


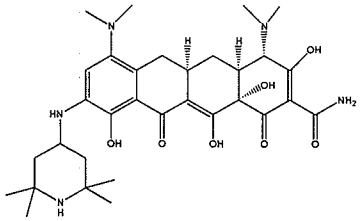


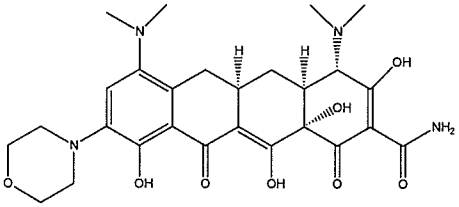


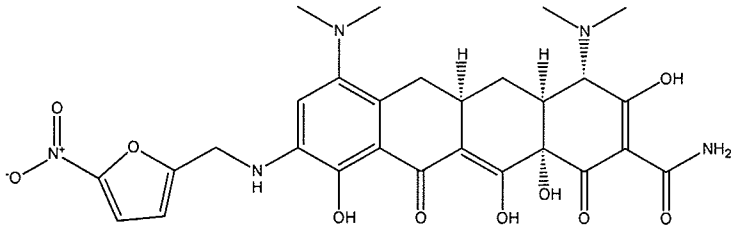


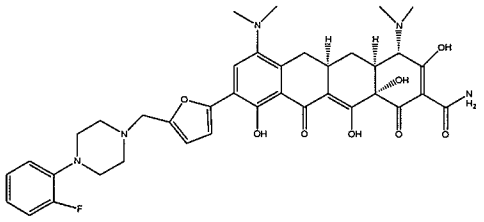


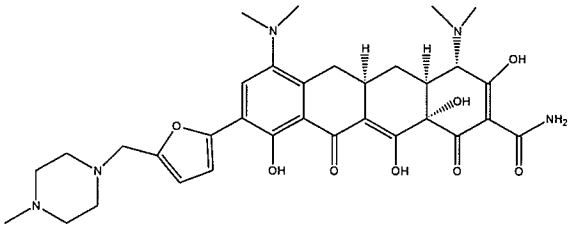


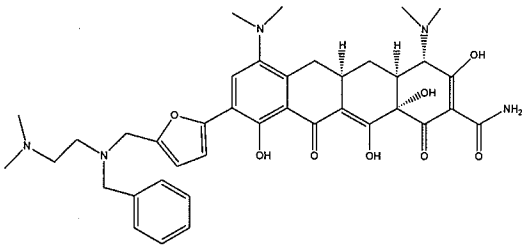


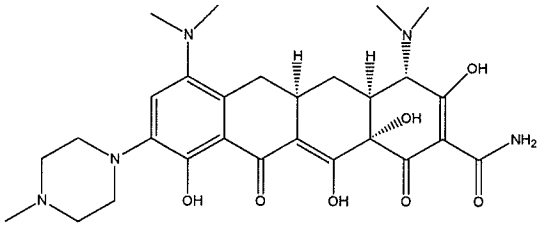


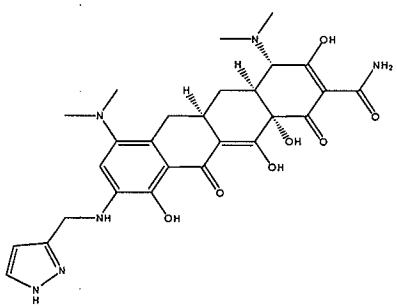


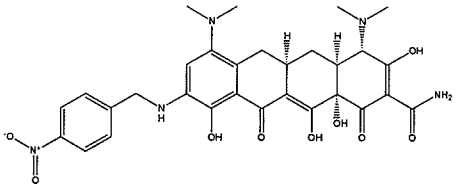


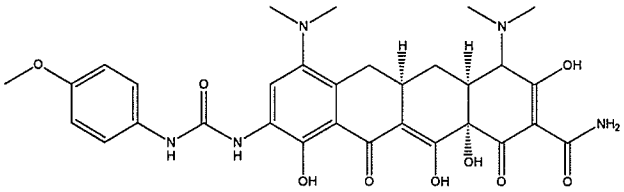


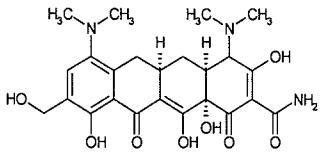


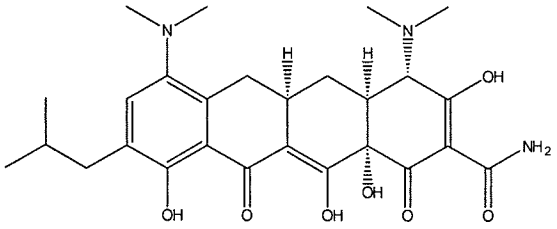


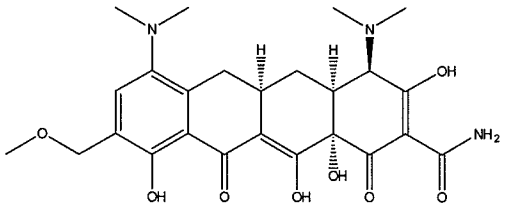


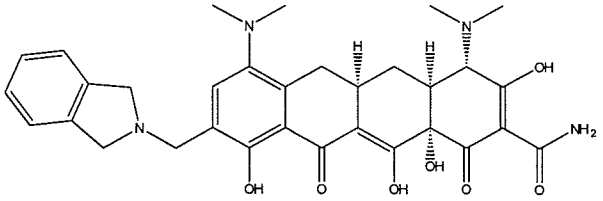


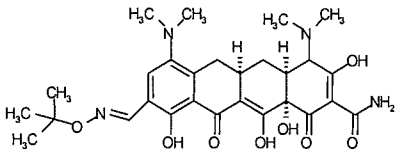


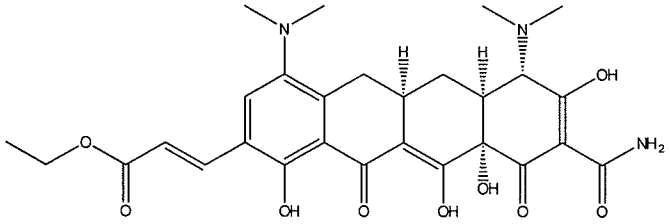


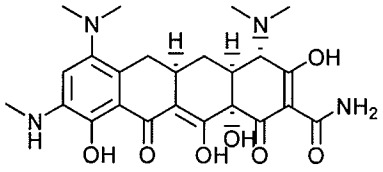


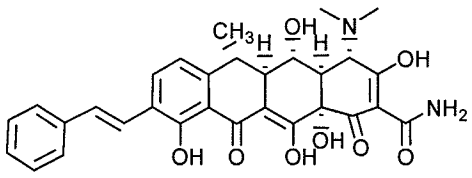


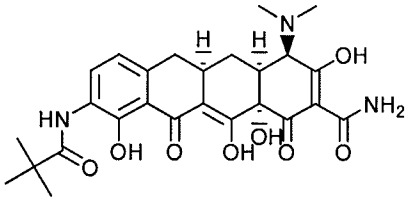


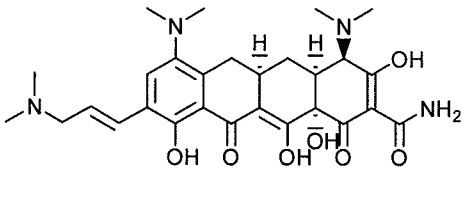


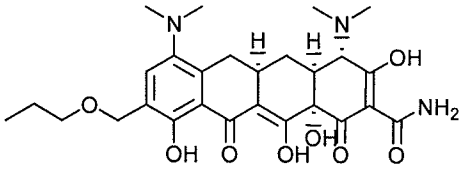


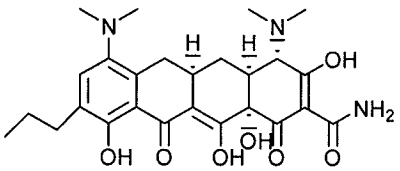


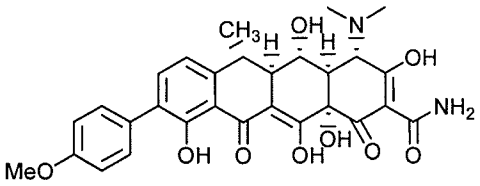


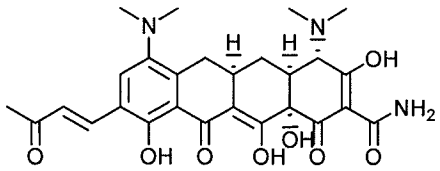


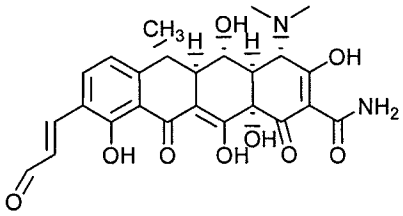


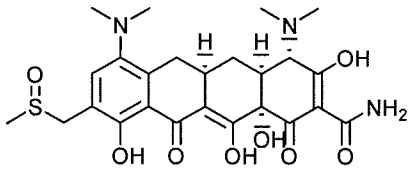


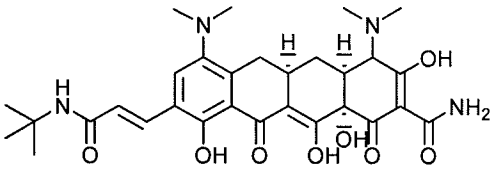


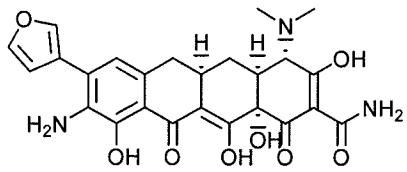


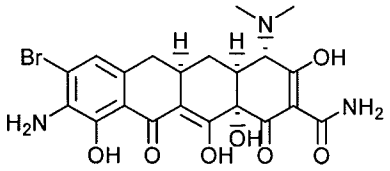


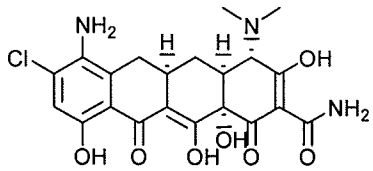


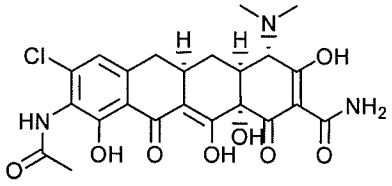


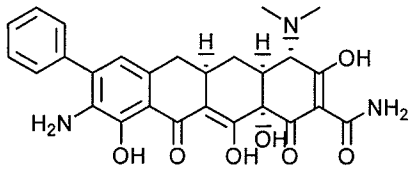


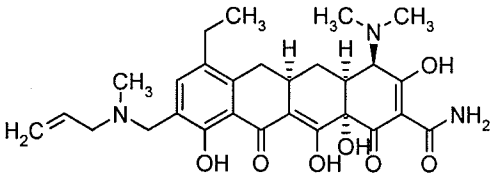


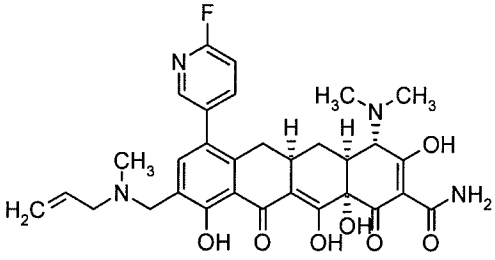


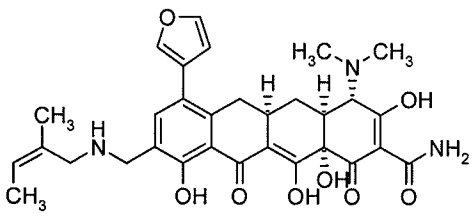


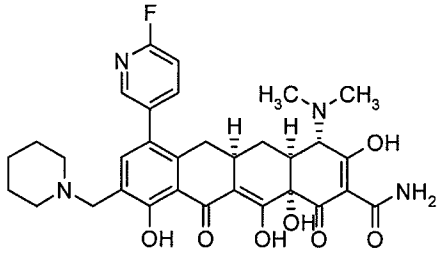


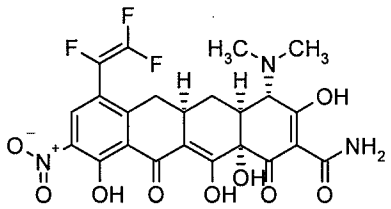


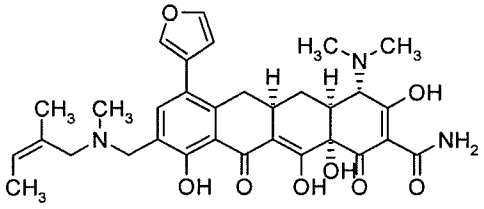


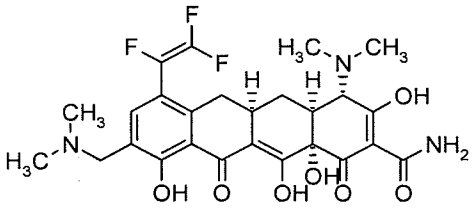


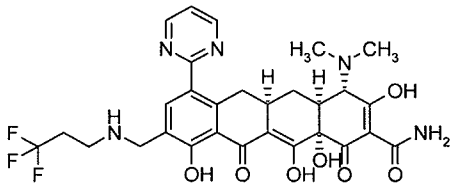


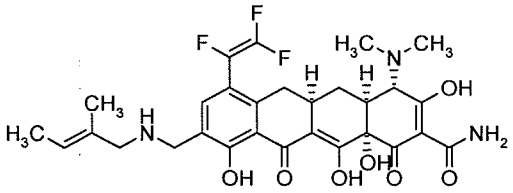


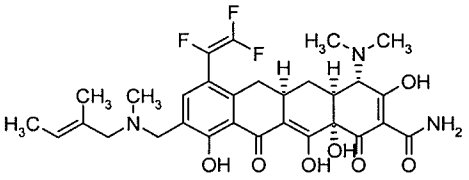


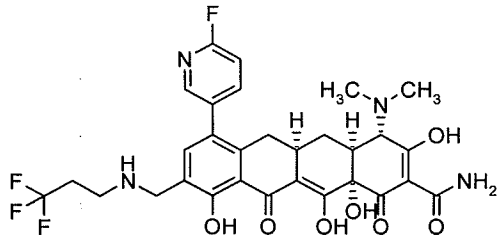


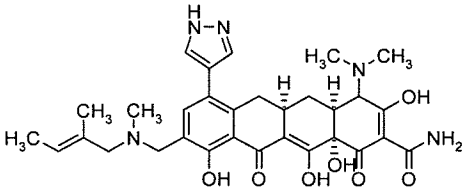


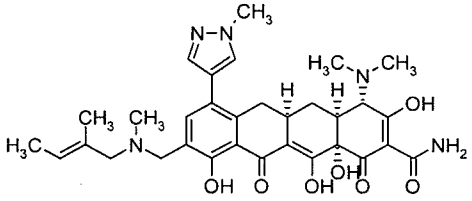


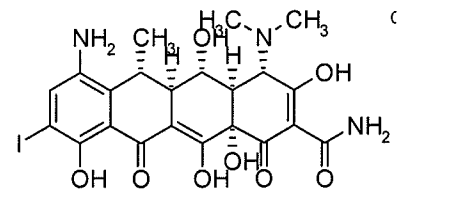


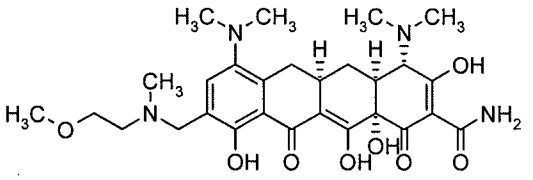


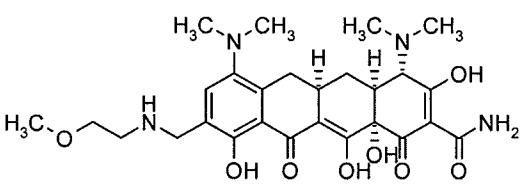


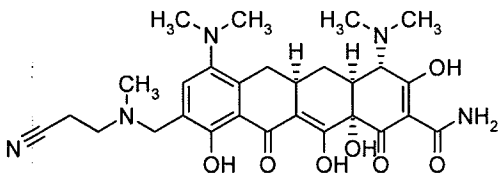


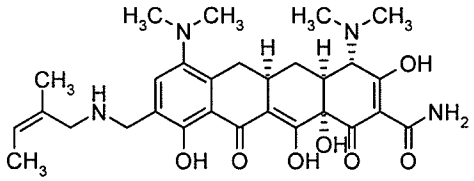


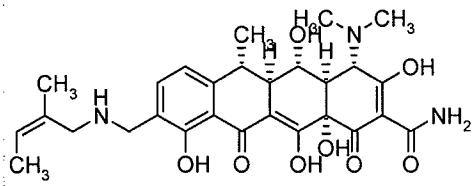


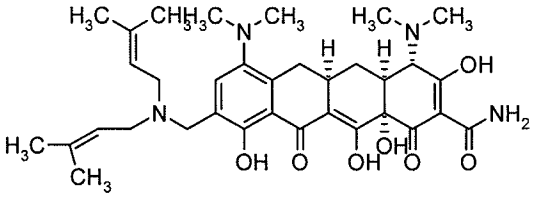


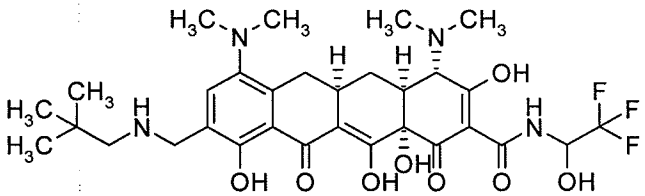


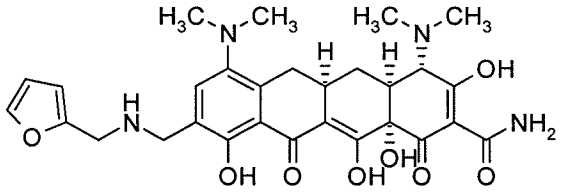


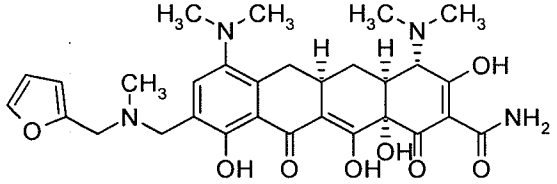


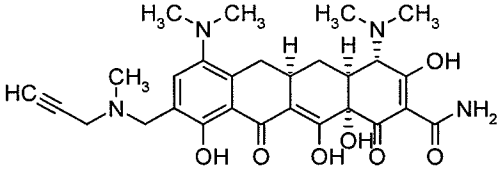


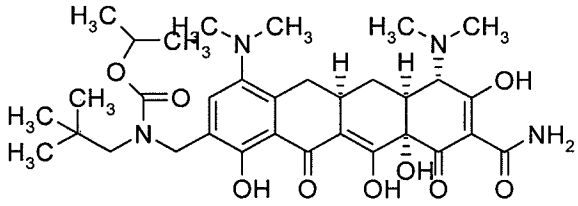


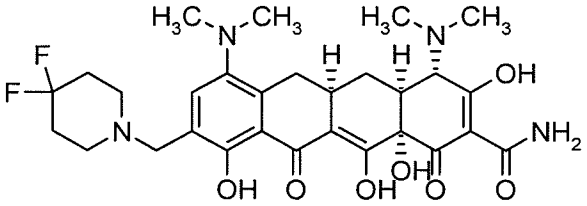


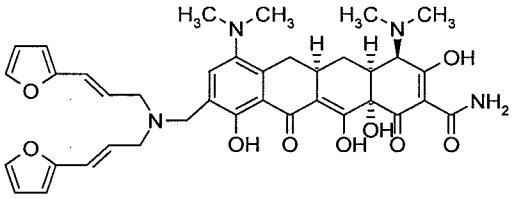


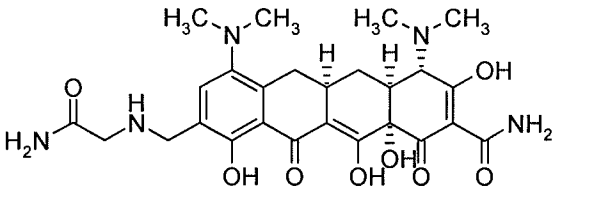


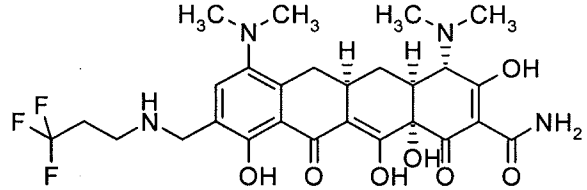


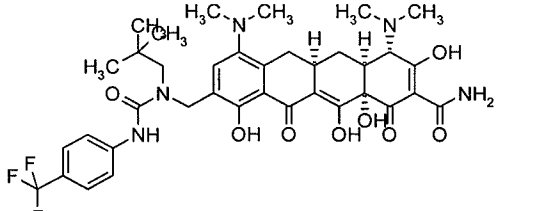


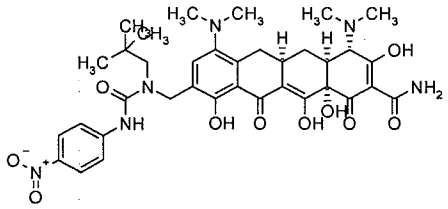


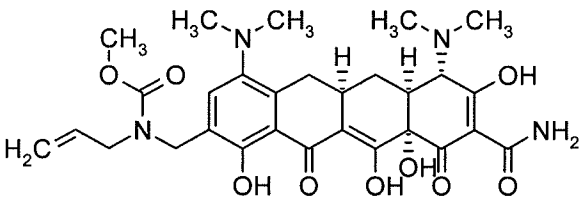


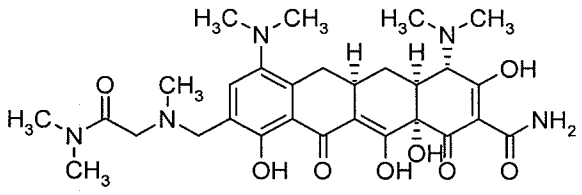


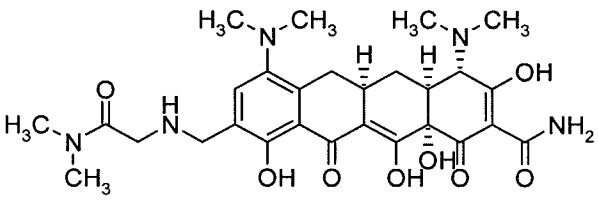


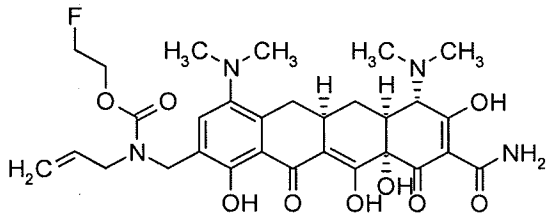


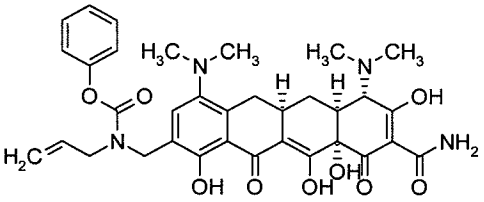


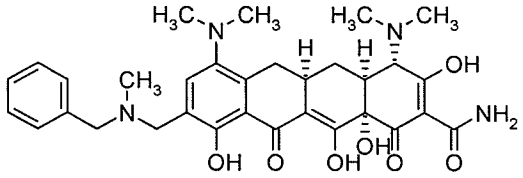


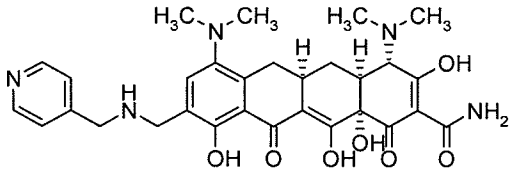


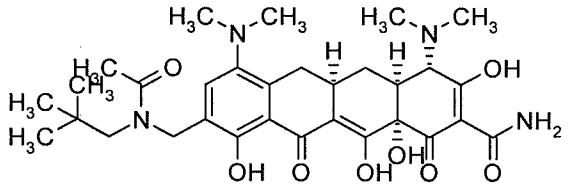


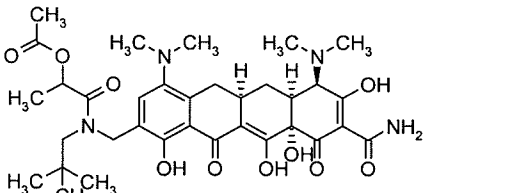


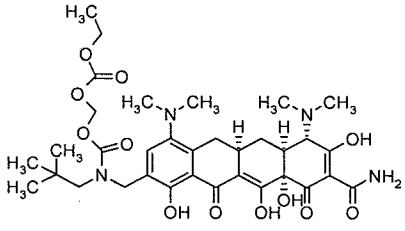


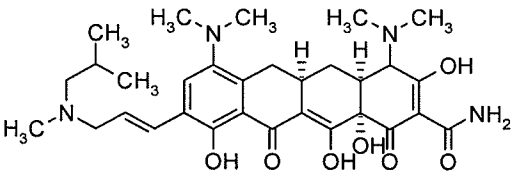


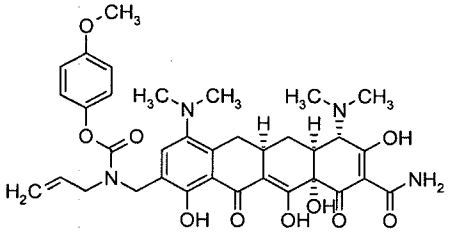


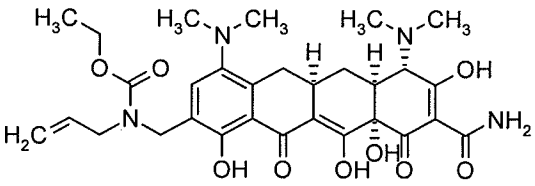


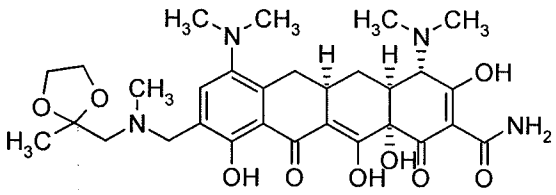


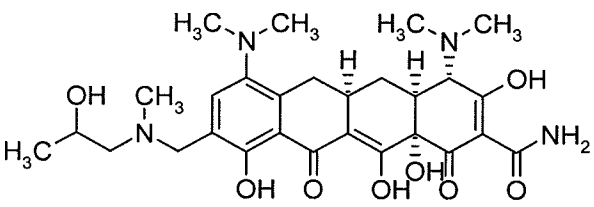


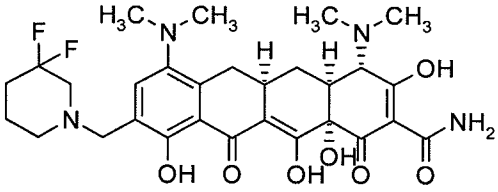


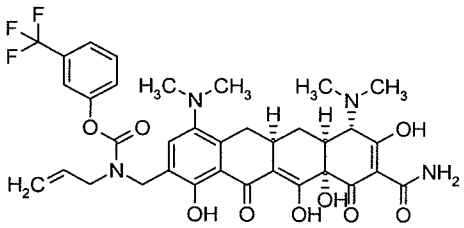


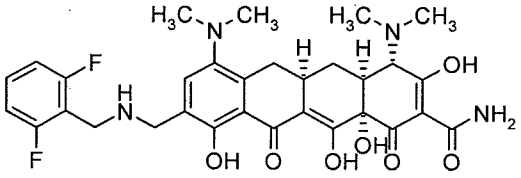


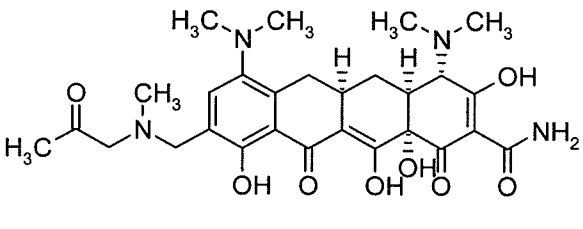


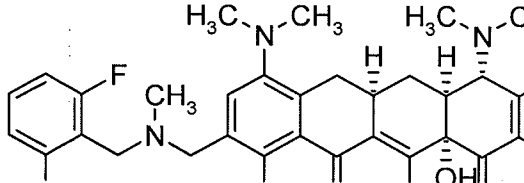


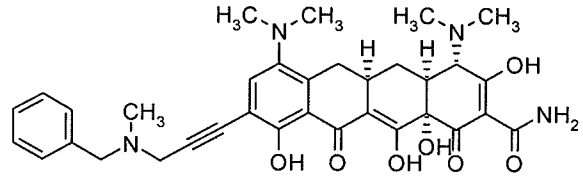


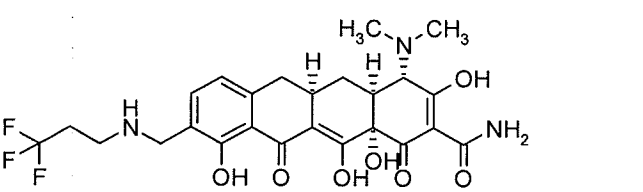


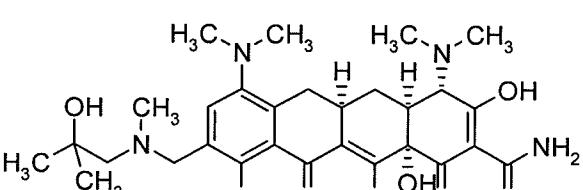


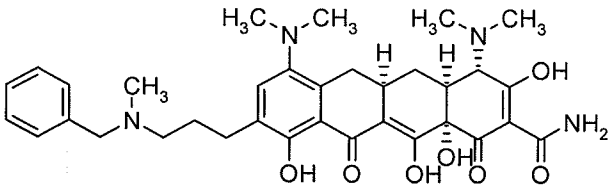


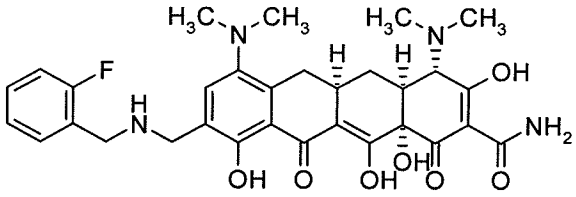


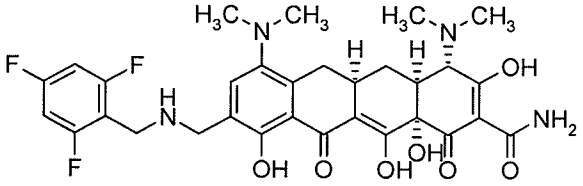


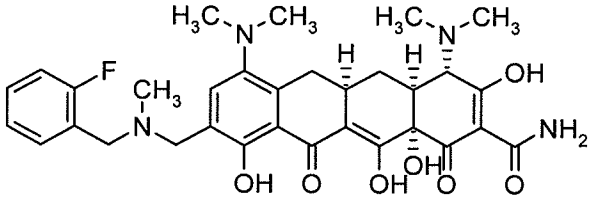


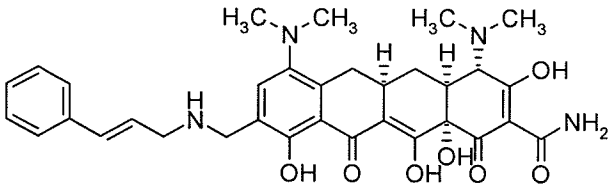


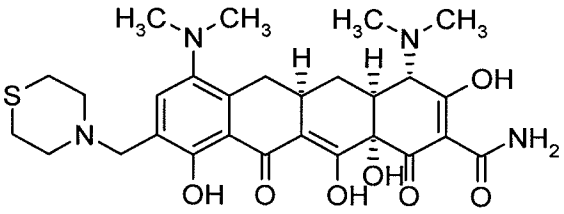


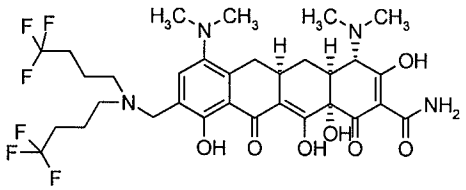


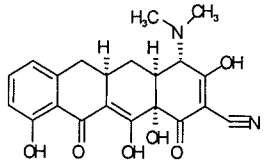


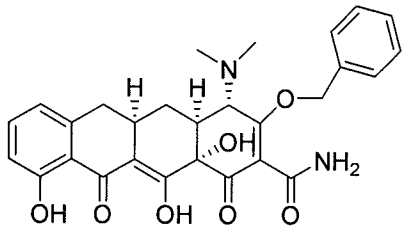


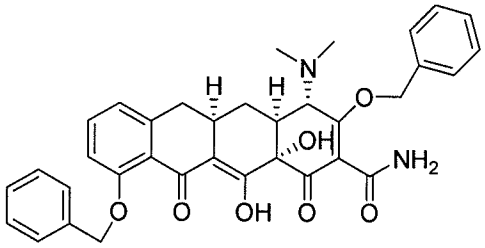


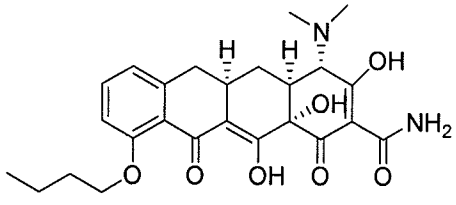


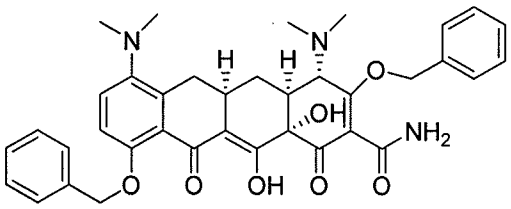


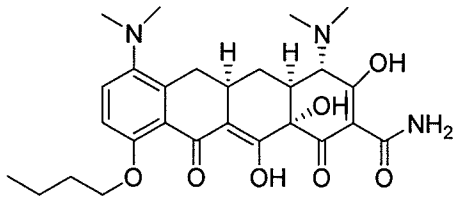


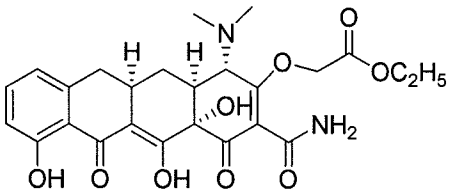


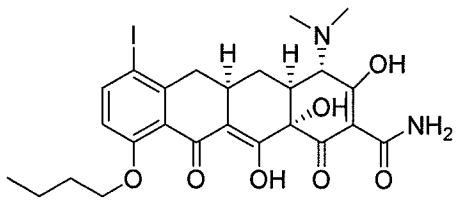


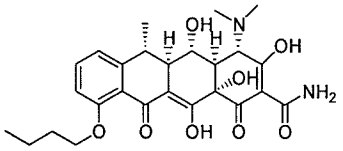


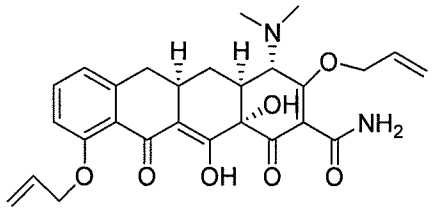


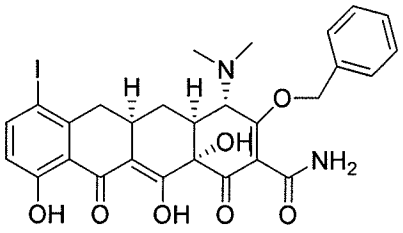


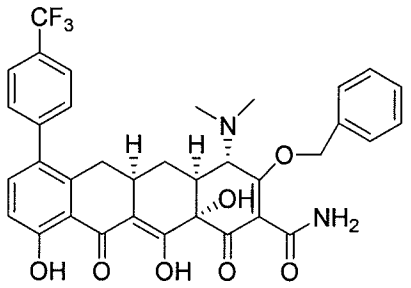


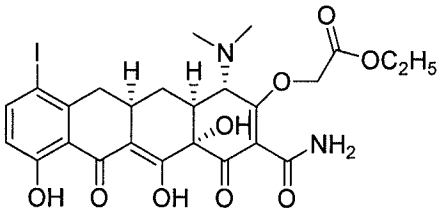


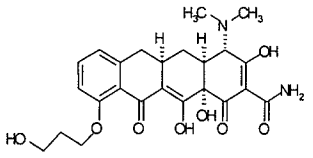


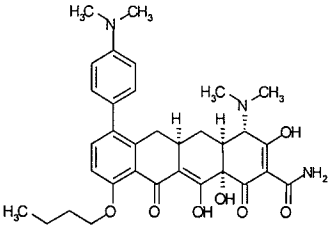


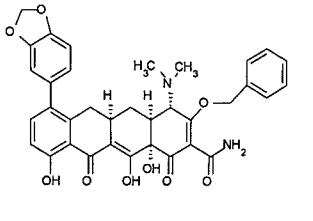


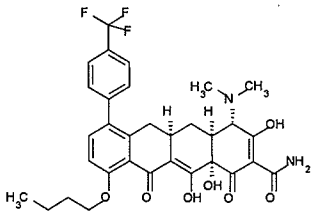


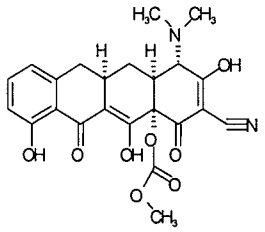


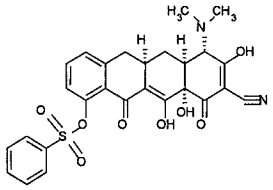


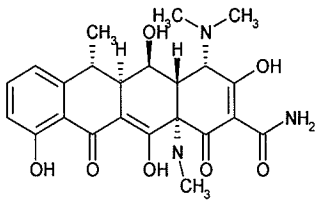


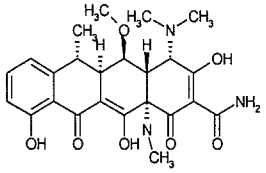


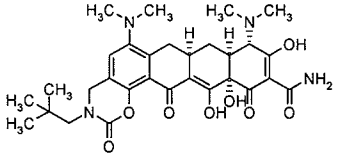


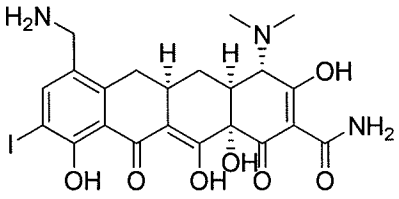


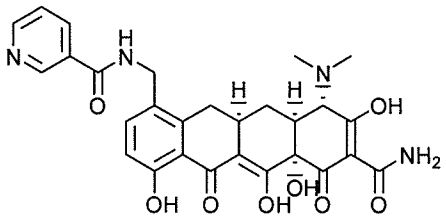


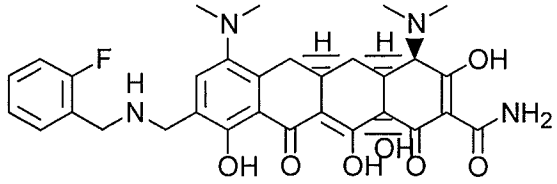


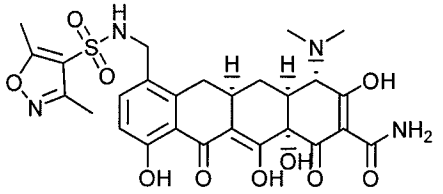


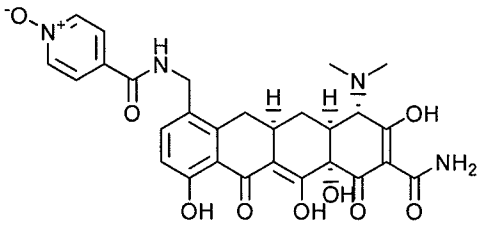


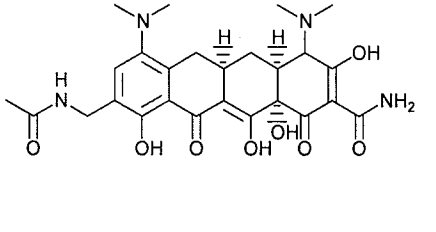


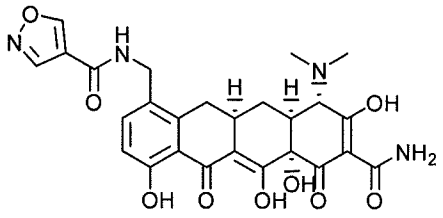


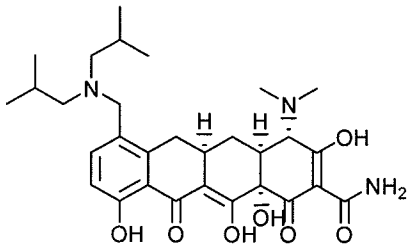


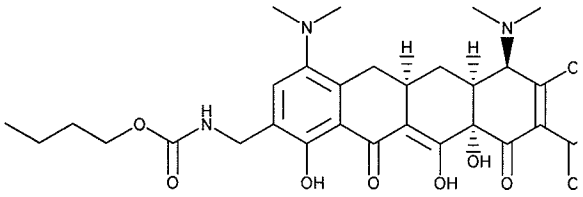


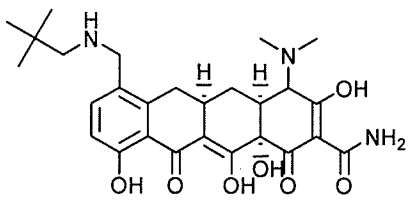


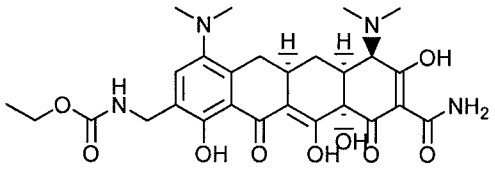


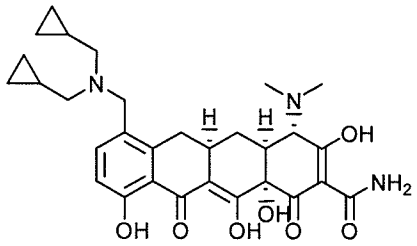


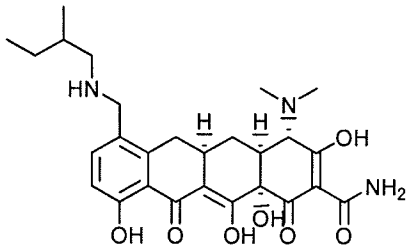


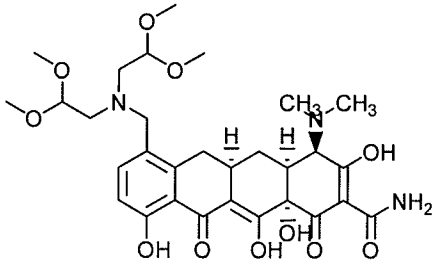


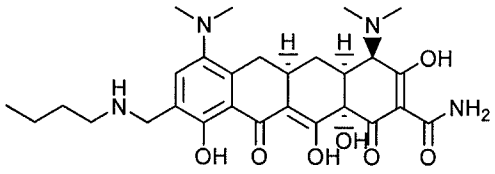


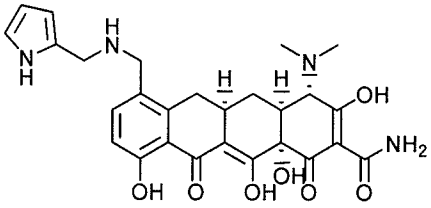


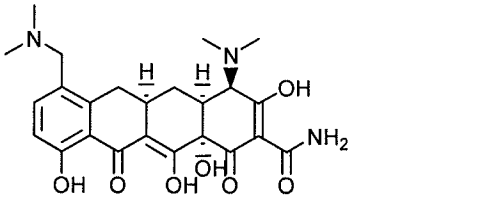


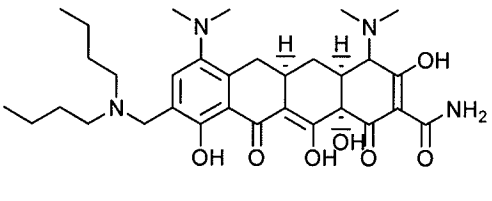


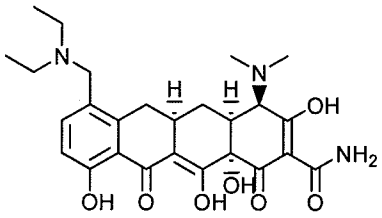


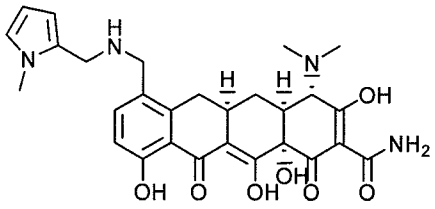


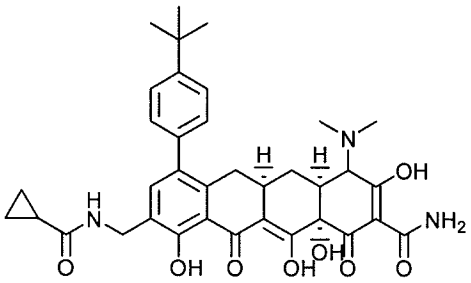


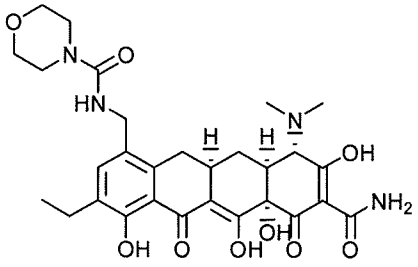


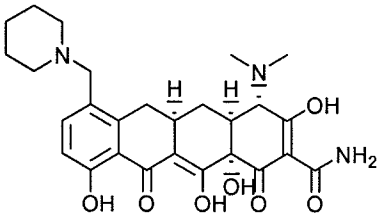


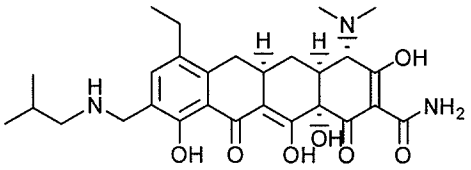


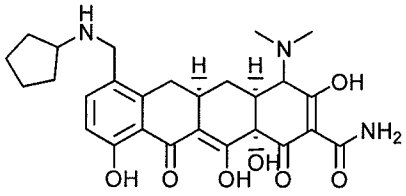


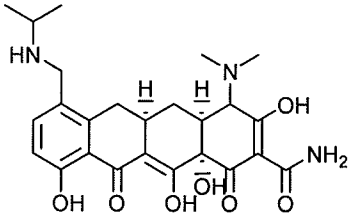


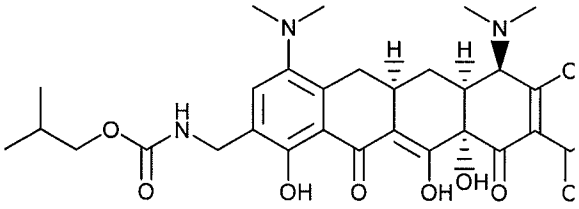


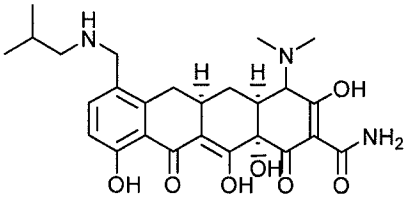


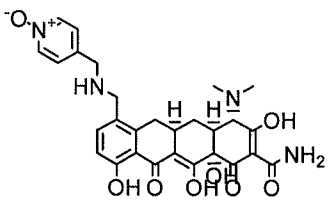


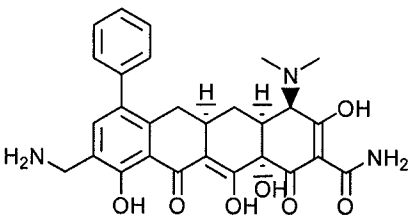


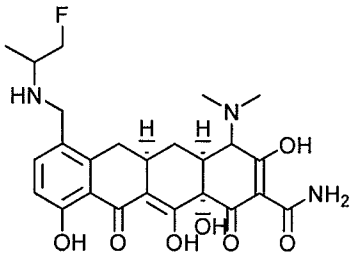


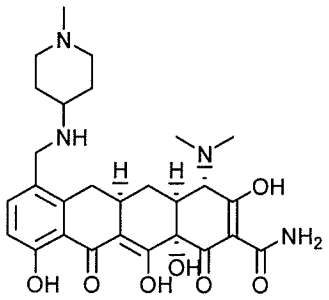


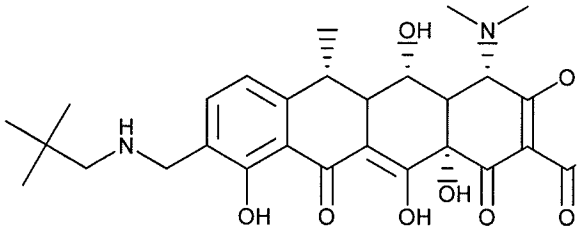


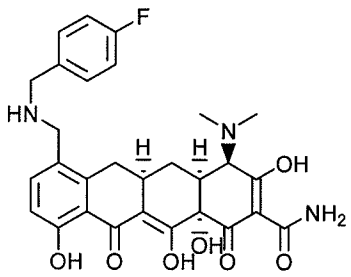


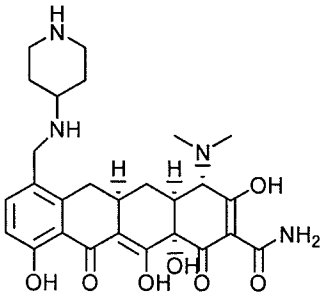


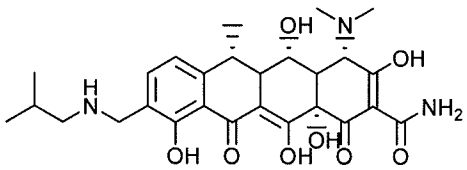


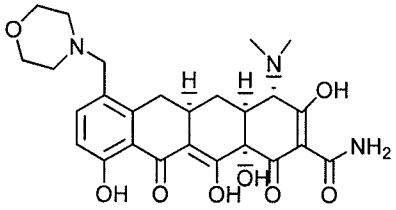


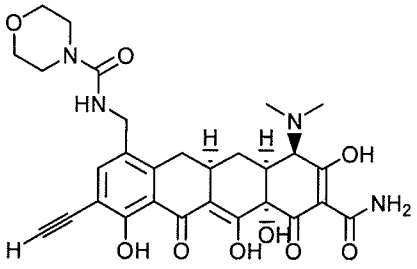


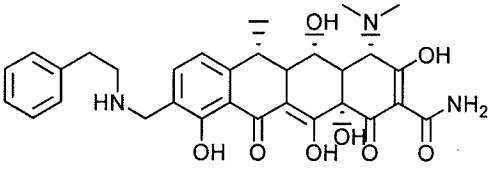


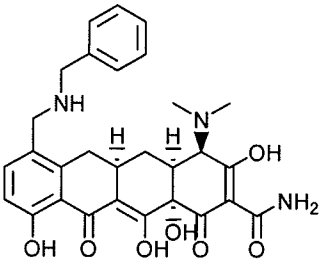


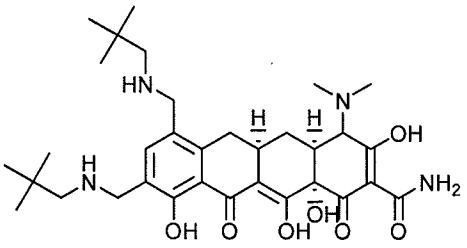


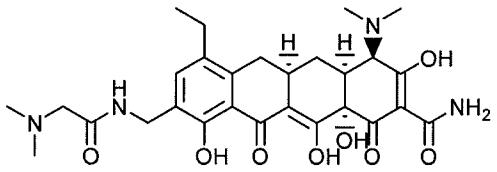


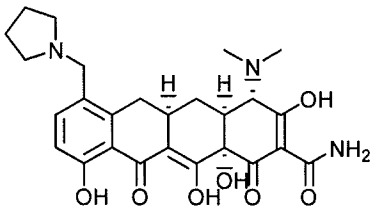


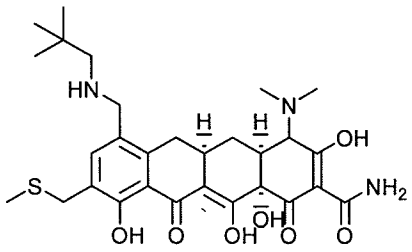


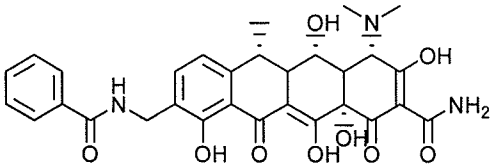


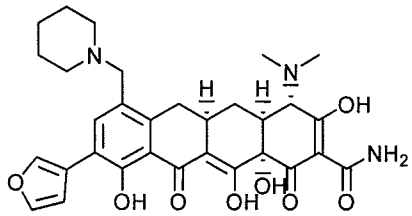


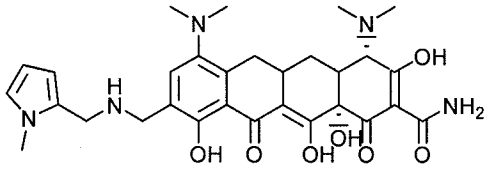


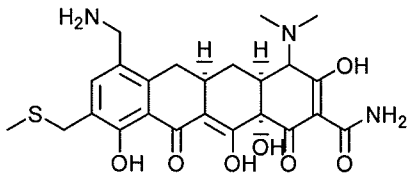


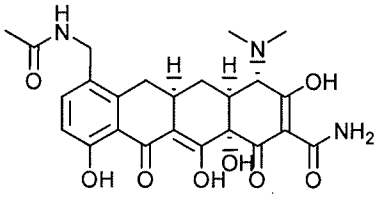


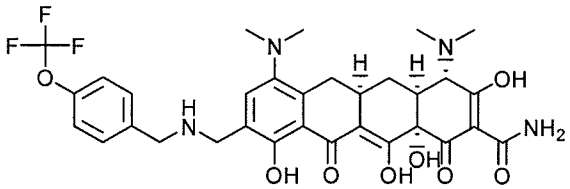


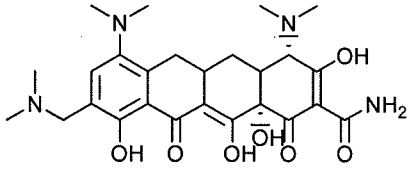


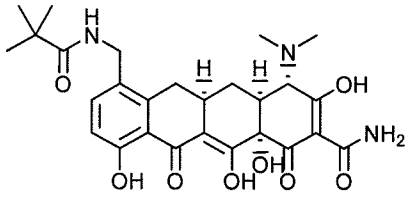


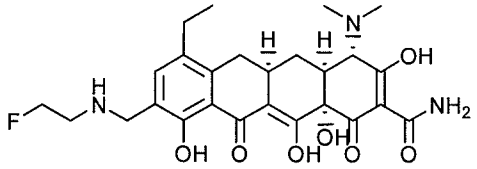


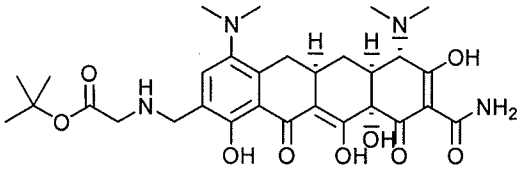


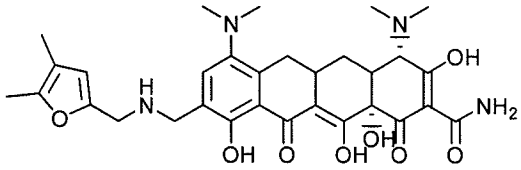


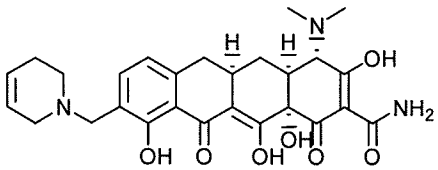


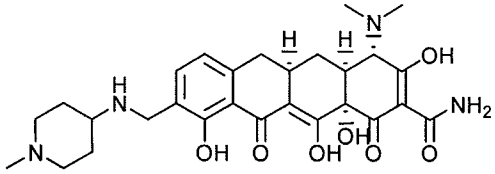


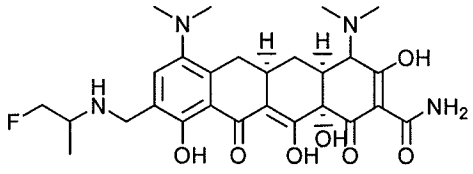


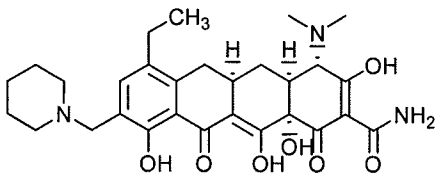


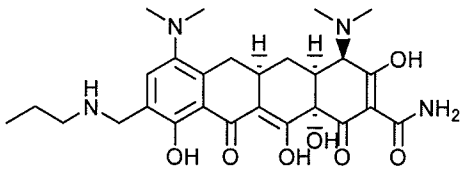


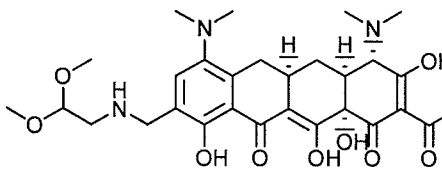


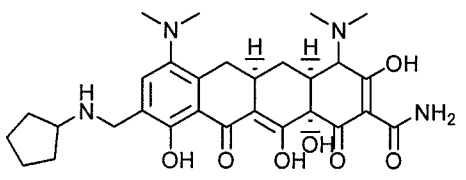


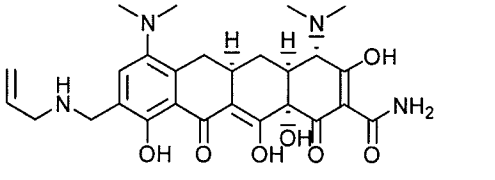


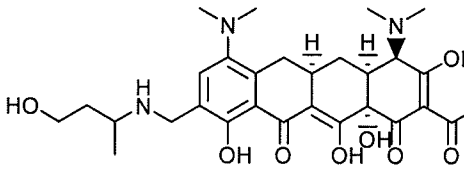


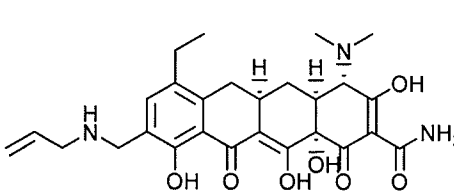


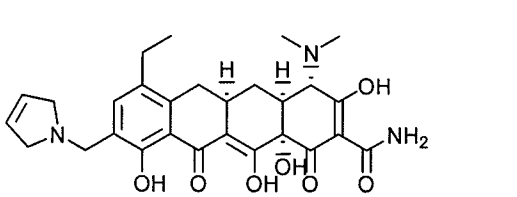


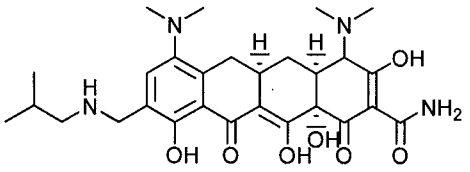


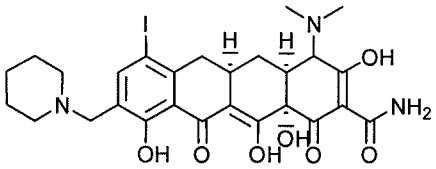


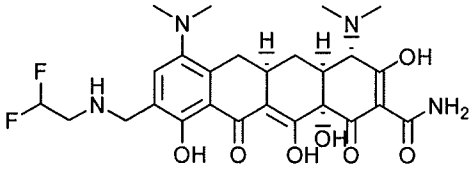


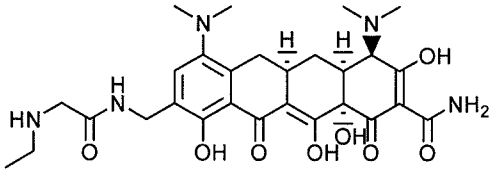


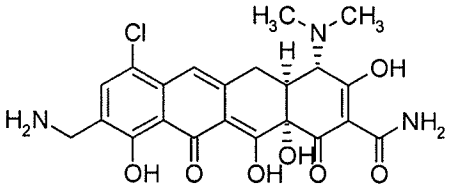


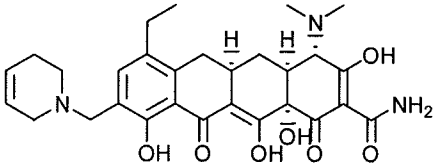


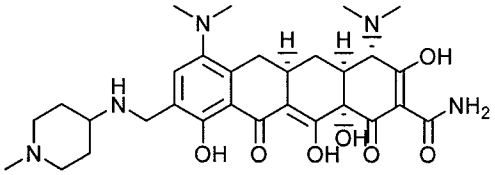


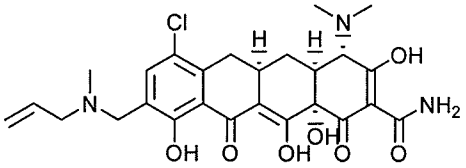


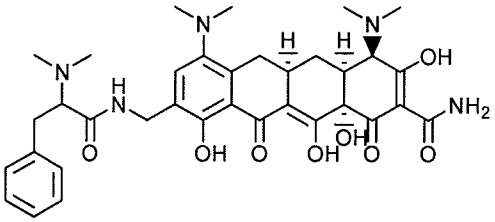


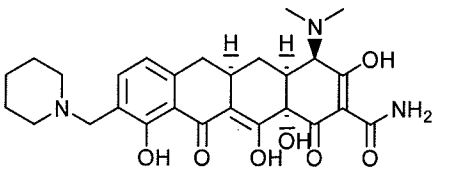


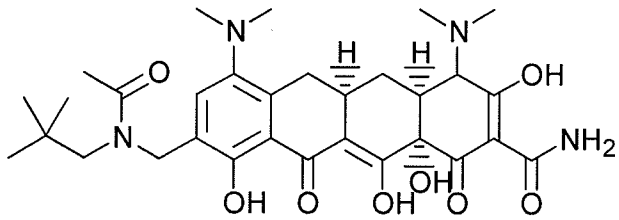


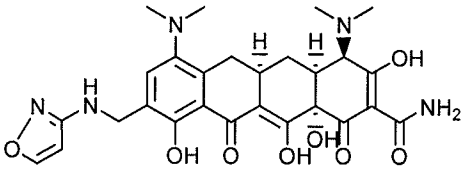


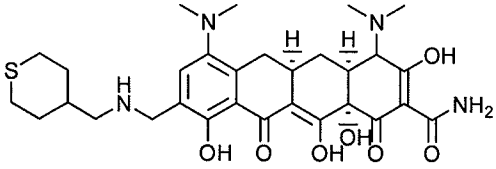


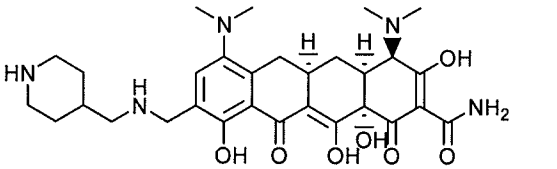


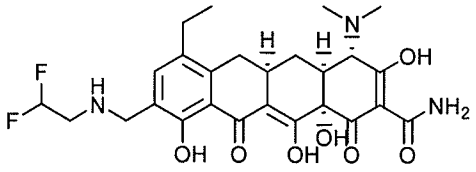


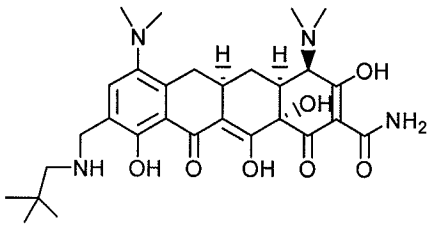


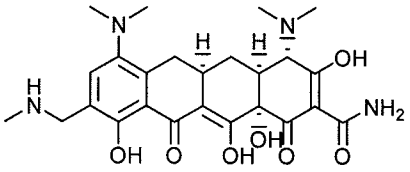


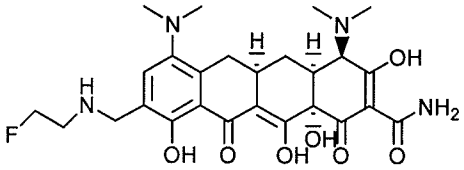


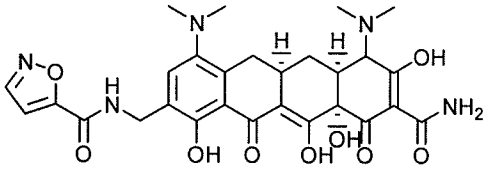


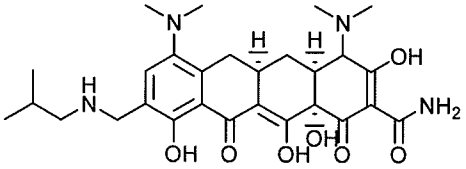


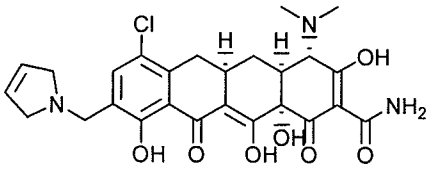


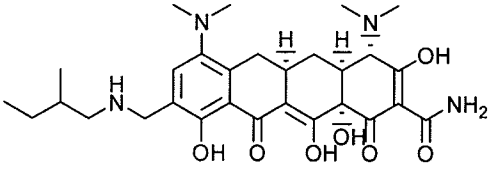


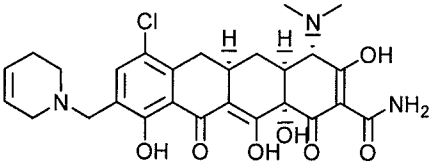


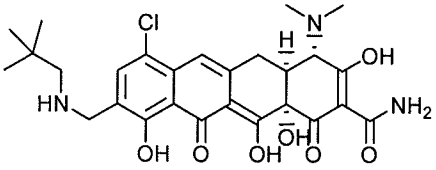


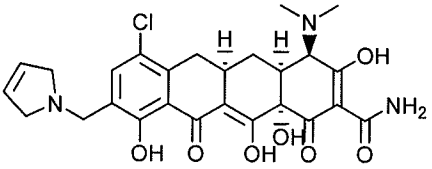


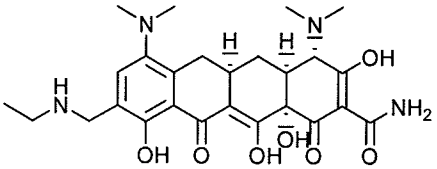


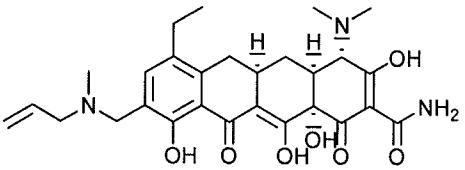


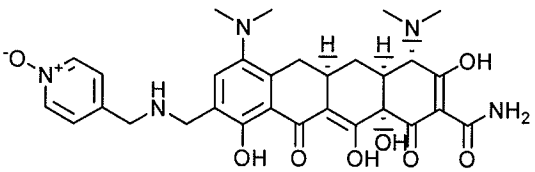


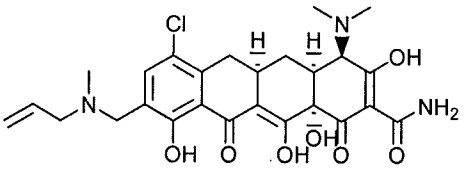


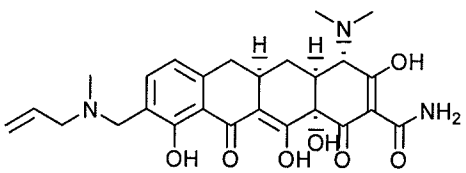


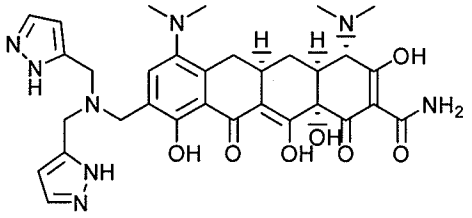


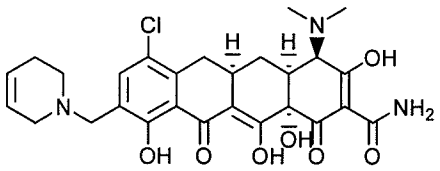


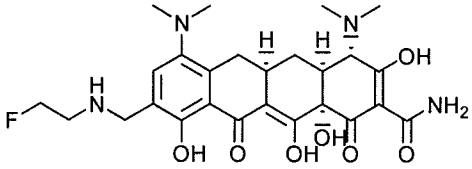


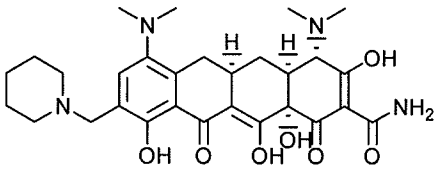


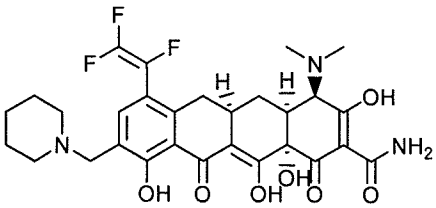


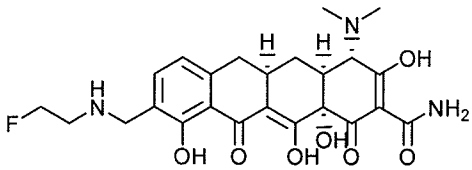


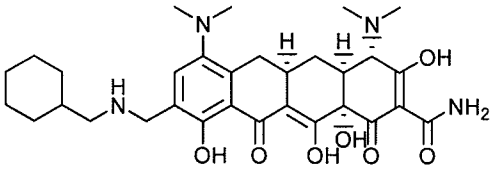


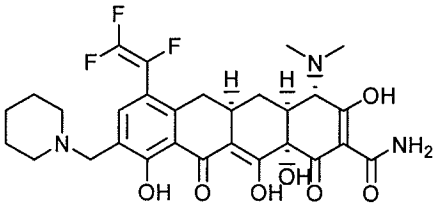


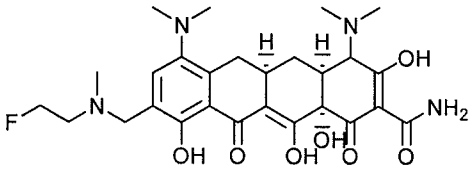


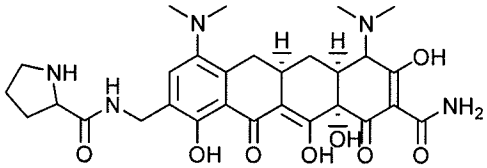


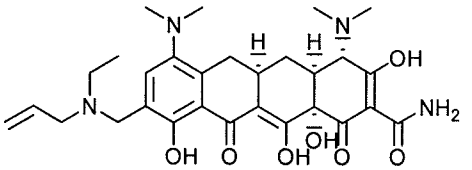


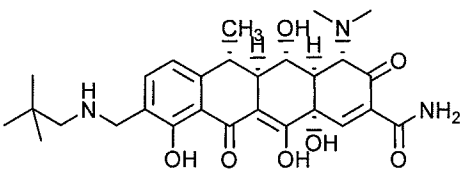


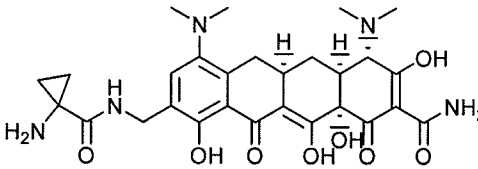


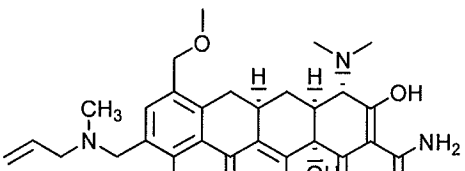


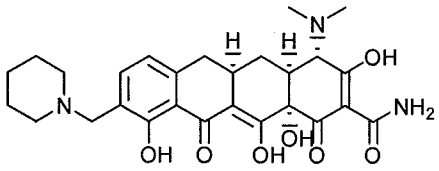


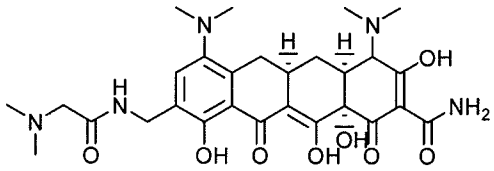


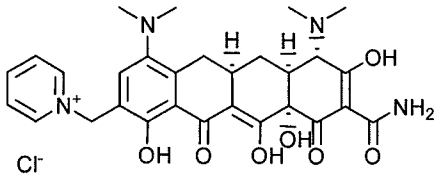


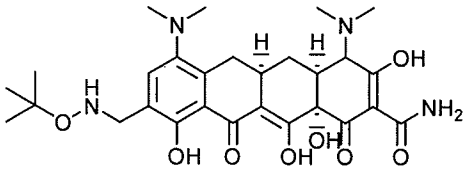


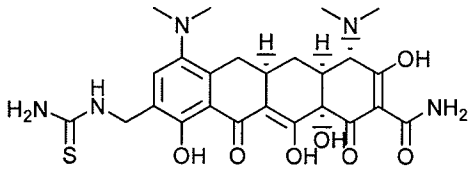


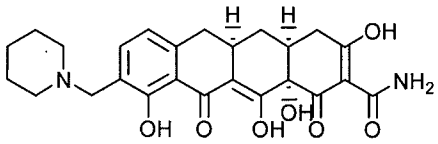


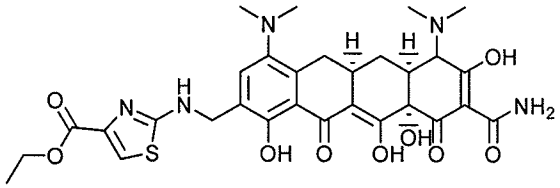


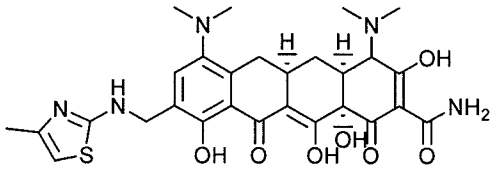


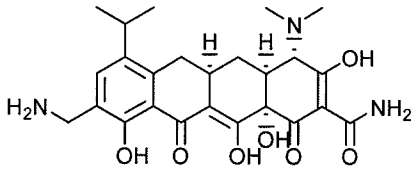


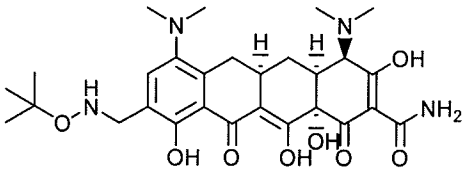


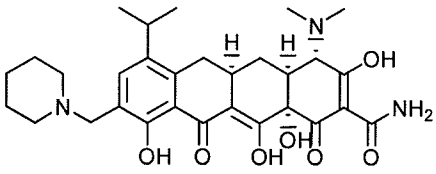


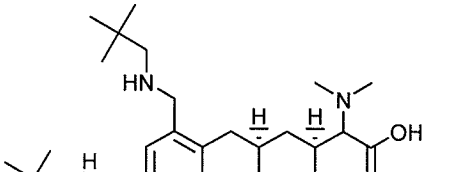


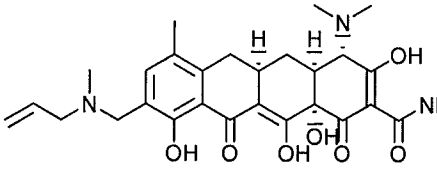


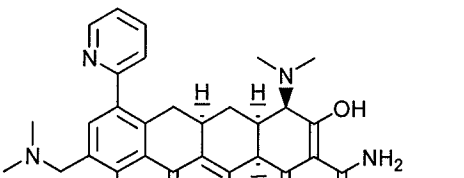


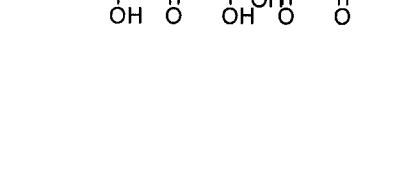


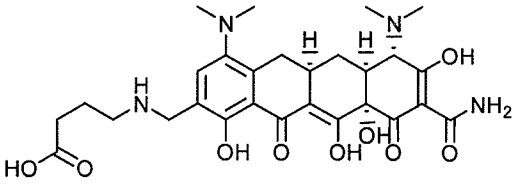


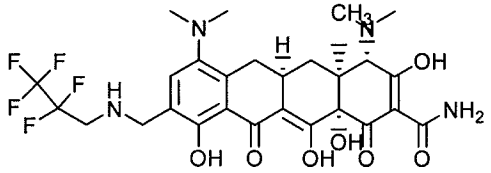


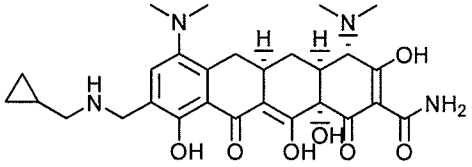


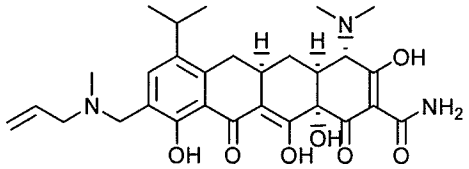


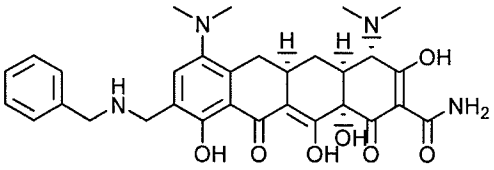


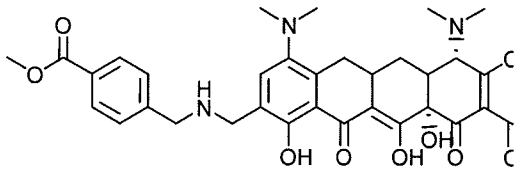


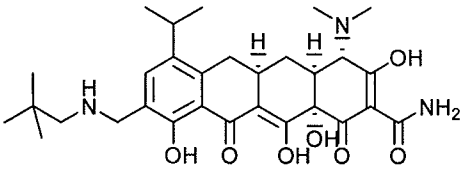


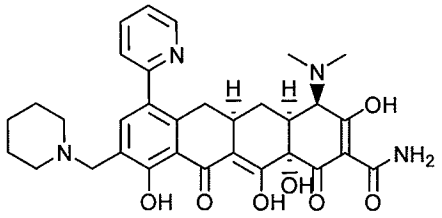


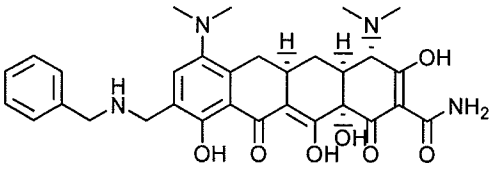


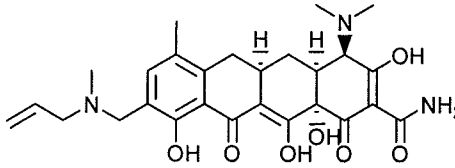


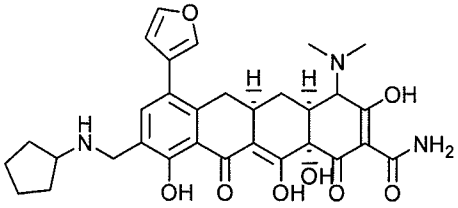


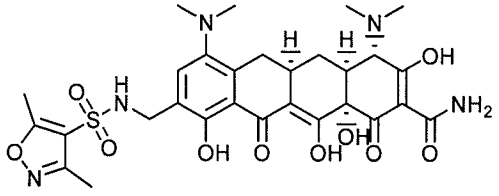


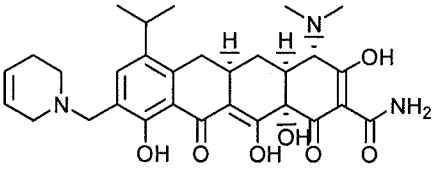


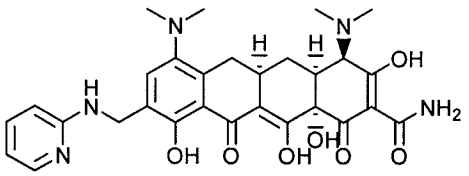


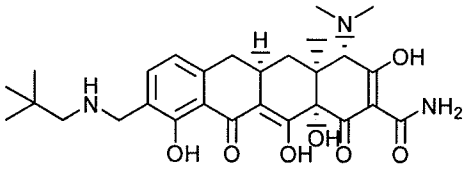


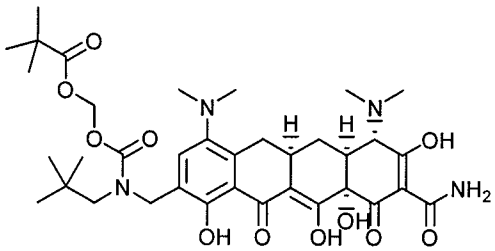


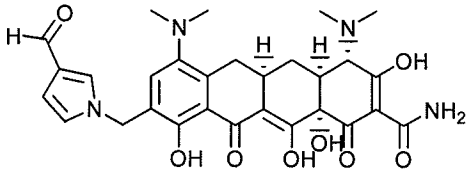


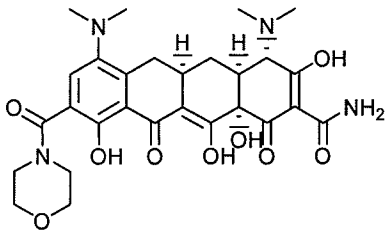


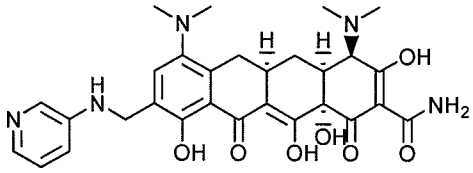


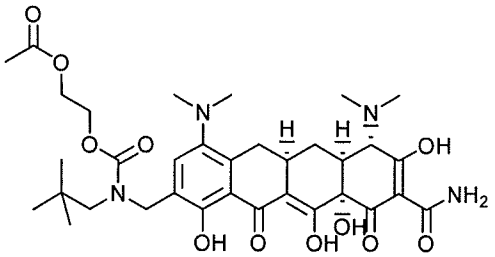


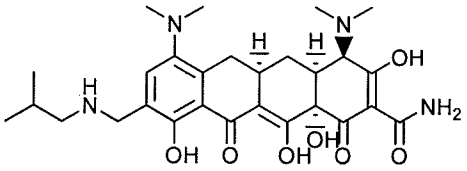


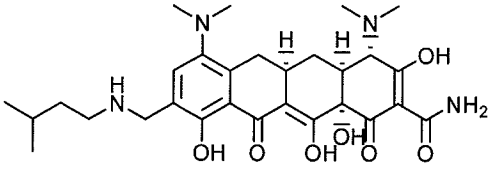


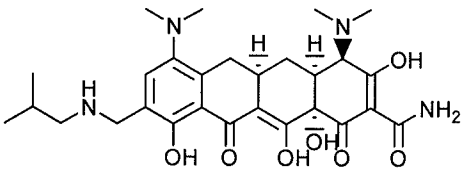


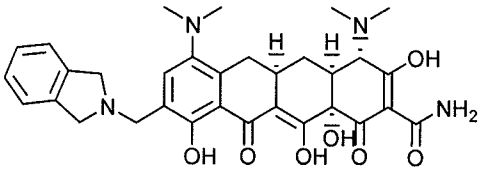


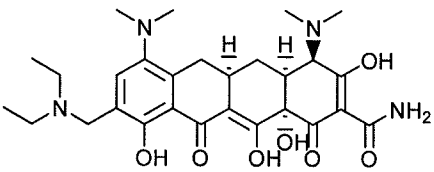


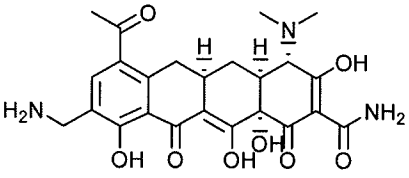


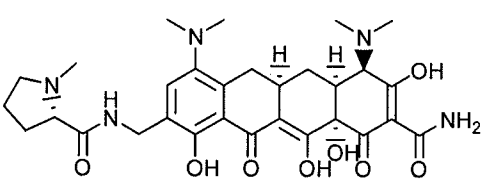


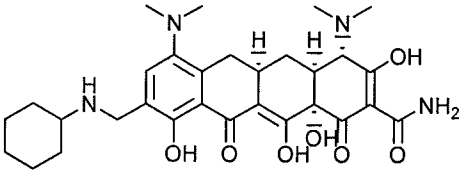


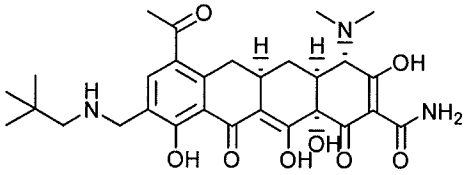


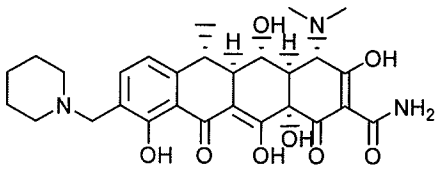


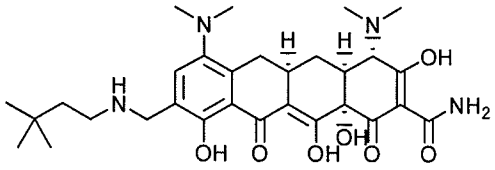


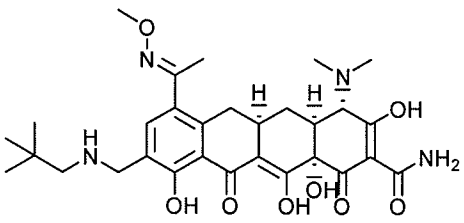


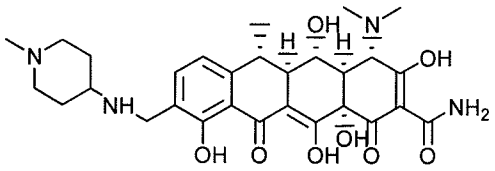


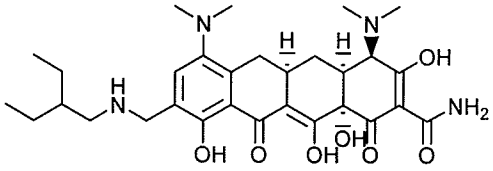


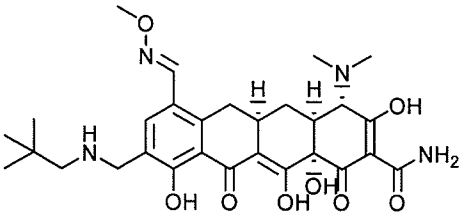


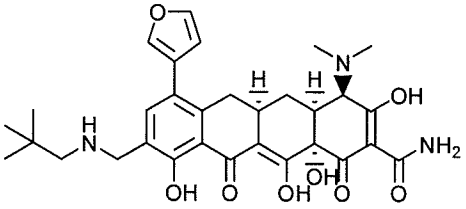


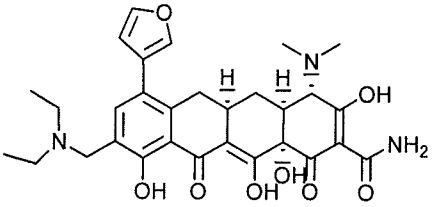


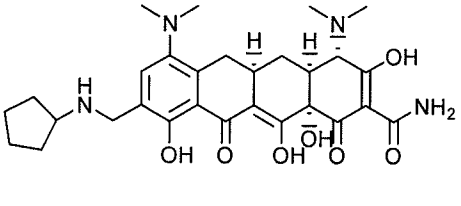


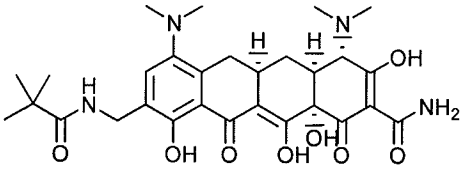


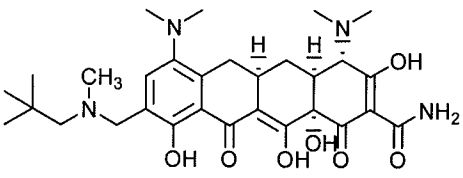


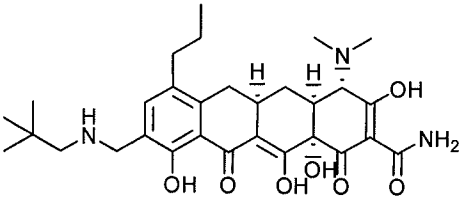


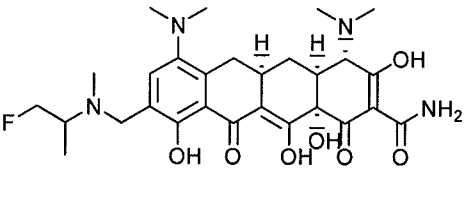


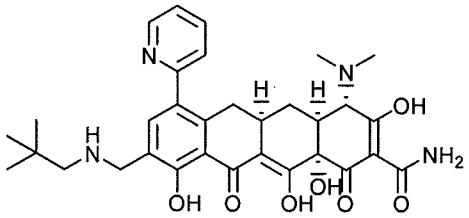


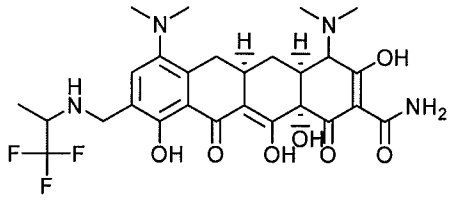


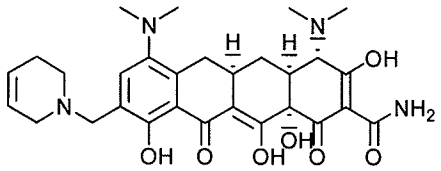


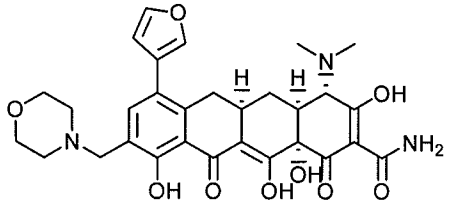


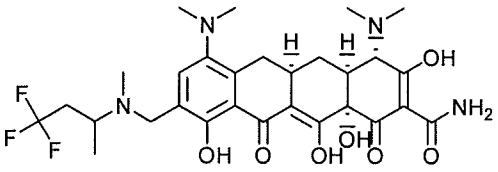


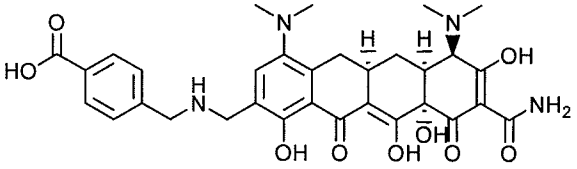


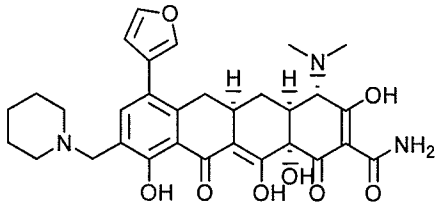


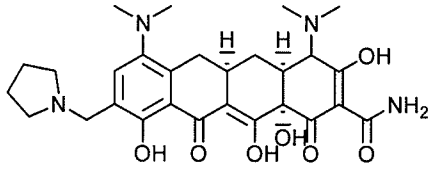


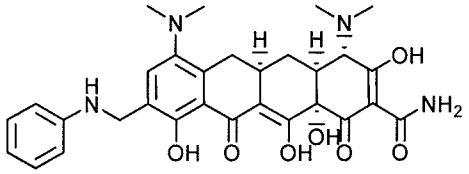


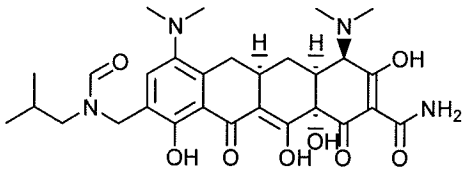


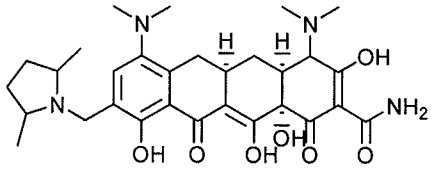


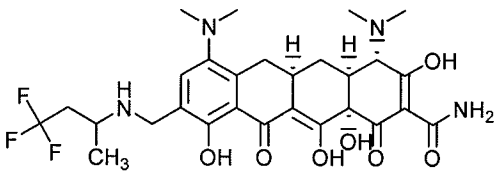


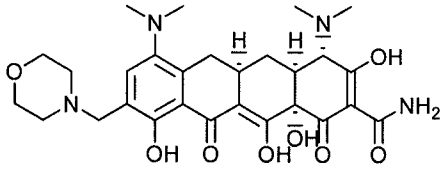


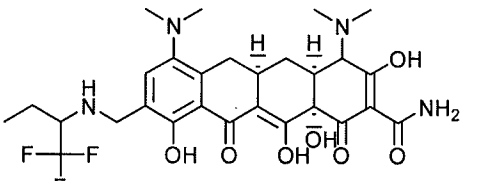


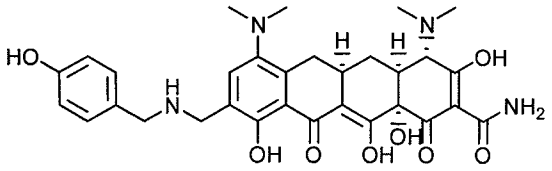


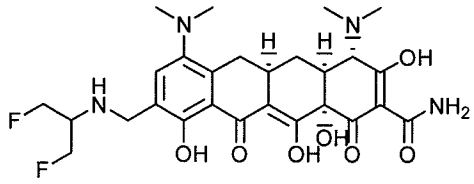


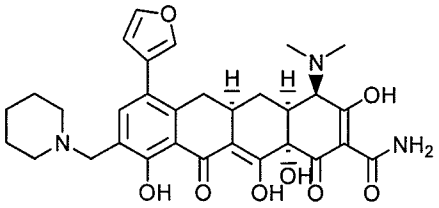


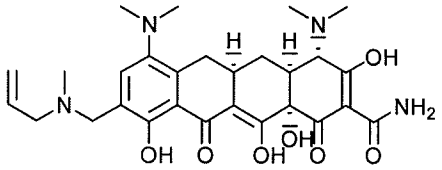


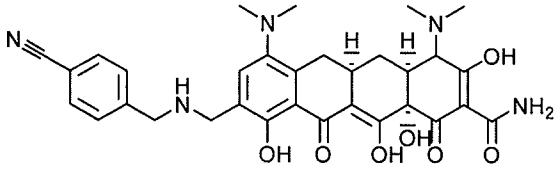


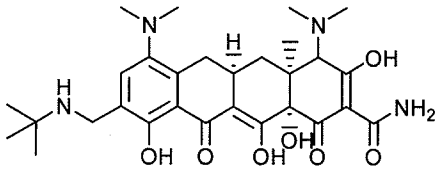


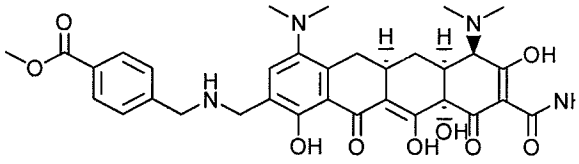


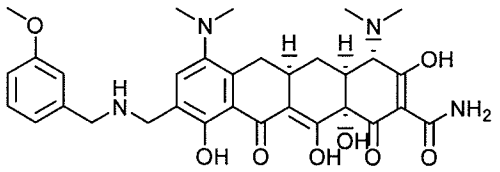


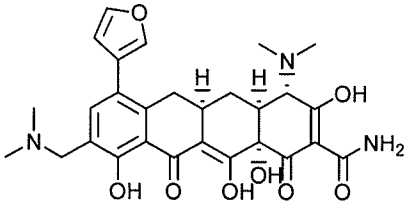


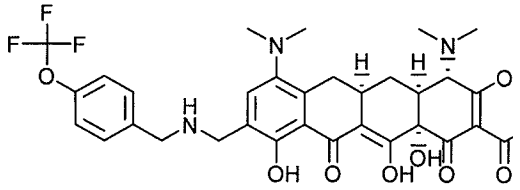


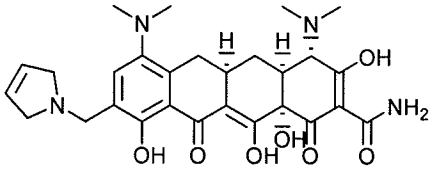


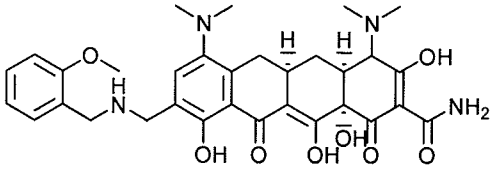


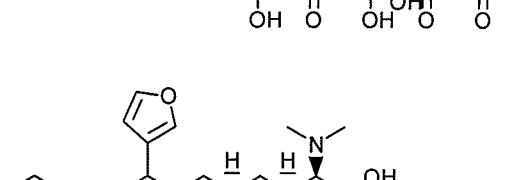


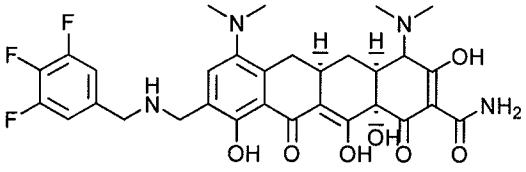


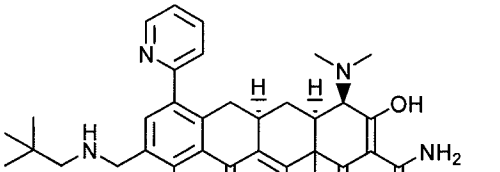


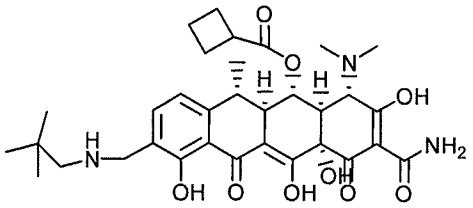


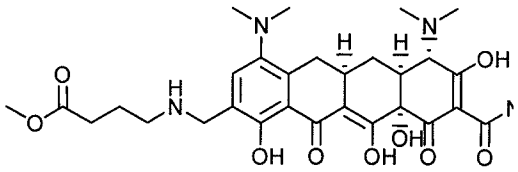


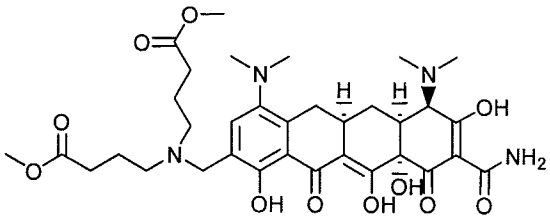


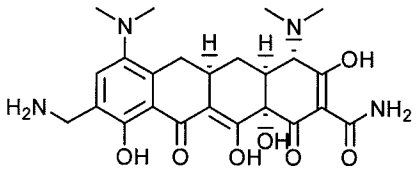


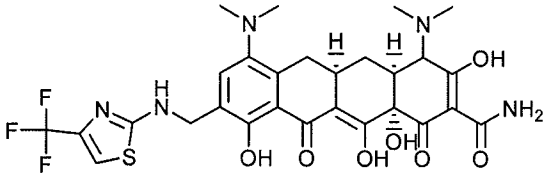


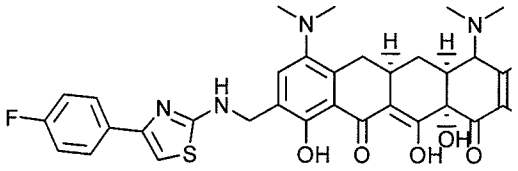


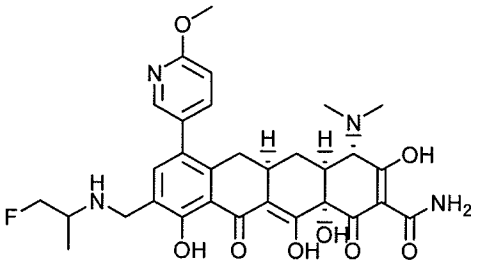


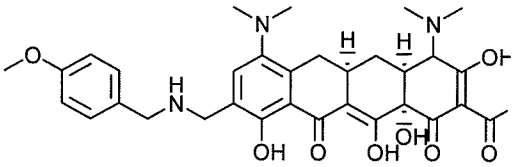


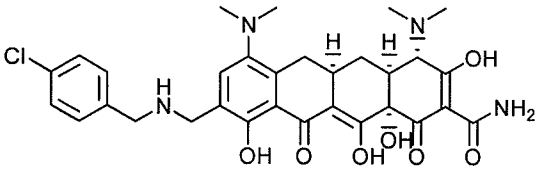


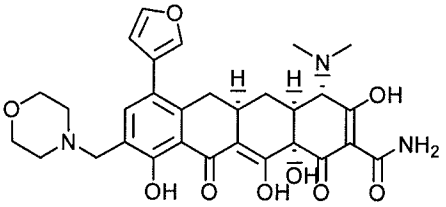








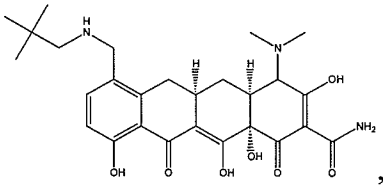




and pharmaceutically acceptable salts thereof.

55. **(Canceled)**

56. **(Canceled)**

57. **(Previously Presented)** The method of claim 1, wherein said tetracycline compound is:  , and pharmaceutically acceptable salts thereof.

58. **(Canceled)**

59. **(Currently Amended)** The method of claim ~~58~~1, wherein said modulation of splicing increases splicing of RNA.

60. **(Currently Amended)** The method of claim ~~58~~1, wherein said modulation of splicing decreases splicing of RNA.

61. **(Canceled)**

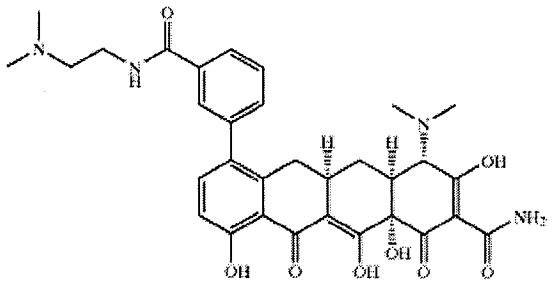
62. **(Currently Amended)** The method of claim 1, wherein said subject is ~~an animal~~ mammal.

63. **(Previously Presented)** The method of claim 62, wherein said mammal is a human.

64. **(Currently Amended)** The method of claim 1, ~~wherein said 68,~~ wherein said modulation of splicing is activation of cryptic splice sites, silencing of consensus splice sites, silencing of exonic or intronic splicing enhancers (ESEs or ISEs), silencing of exonic or inronic splicing silencers (ESSs or ISSs), alteration of the binding or a

component of the splicing machinery to the RNA, or the affecting of intermolecular interactions between components of the splicing machinery.

65. **(New)** The method of claim 1, wherein said tetracycline compound is:



, and pharmaceutically acceptable salts thereof.